=> d his

(FILE 'REGISTRY' ENTERED AT 11:49:36 ON 18 OCT 2001)
DEL HIS Y

L1 1 S LYSOSOMAL ACID LIPASE/CN

FILE 'HCAPLUS' ENTERED AT 11:50:40 ON 18 OCT 2001

L2 1745 S L1 OR LYSOSOMAL ACID LIPASE OR ESTERASE (2A) CHOLESTEROL
L3 0 S LIPID HYDROLYAING (L) (PROTEIN# OR POLYPEPTIDE#)
L4 0 S LIPID HYDROLYZING (L) (PROTEIN# OR POLYPEPTIDE#)
L5 11 S LIPID(L) HYDROLYZING (L) (PROTEIN# OR POLYPEPTIDE#)
L6 1754 S L2 OR L6
L7 36 S TARGET? (L) RECEPTOR (L) LYSOSOME?
L8 1 S L7 AND L8
L9 1486 S MANNOSE (L) RECEPTOR?
L10 6 S L7 AND L10
L11 22055 S ATHEROSCLEROSIS? OR ANTIARTERIOSCELER?
L12 24524 S ATHEROSCLEROSIS? OR ANTIARTERIOSCLER?
L13 24524 S L13 OR ANTIATHERIOSCLER?
L14 25226 S L13 OR ANTIATHEROSCLER?
L15 128 S L15 AND L7
L16 1 S L16 AND MANNOSE?
L17 46481 S VECTOR?
L18 1 S L16 AND L18
L19 15431 S ACETYLGLYCOSYL? OR LYSOSOME?
L20 25 S L20 AND L16
L21 6 S L9 OR L11 OR L17 OR L19
L22 69164 S GENE THERAPY OR DRUG DELIVER?
L23 2 S L16 AND L23
L24 123743 S MUTAT?
L25 128 S L16 AND L2
L26 3 S L16 AND L25
L27 243 S WOLMAN? OR CHOLESTER? (2A) STORAGE?
L28 4 S L28 AND L16
L29 470344 S DISEAS? OR DISORDER?
L30 21 S L30 AND L16
L31 794880 S TREA? OR THERAP?
L32 4 S L31 AND L32
L33 14 S L22 OR L24 OR L27 OR L29 OR L33
L34 14 S L31 NOT L34
L35

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=> fidl reg
FIDL IS NOT A RECOGNIZED COMMAND

=> fil reg
FILE 'REGISTRY' ENTERED AT 12:03:53 ON 18 OCT 2001
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STRUCTURE FILE UPDATES:   16 OCT 2001  HIGHEST RN 362587-51-7
DICTIONARY FILE UPDATES:  16 OCT 2001  HIGHEST RN 362587-51-7

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

   Please note that search-term pricing does apply when
   conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER see
HELP CROSSOVER for details.

Calculated physical property data is now available.  See HELP PROPERTIES
for more information.  See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d que l1;d l1
L1             1 SEA FILE=REGISTRY ABB=ON  LYSOSOMAL ACID LIPASE/CN



L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2001 ACS
RN   9026-00-0  REGISTRY
CN   Esterase, cholesterol (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   Cholesterase
CN   Cholesterin esterase
CN   Cholesterol ester hydrolase
CN   Cholesterol esterase
CN   Cholesteryl ester hydrolase
CN   Cholesteryl esterase
CN   E.C. 3.1.1.13
CN   Lysosomal acid lipase
CN   Neutral cholesteryl ester hydrolase
CN   Sterol ester hydrolase
CN   Sterol esterase
DR   9040-56-6
MF   Unspecified
CI   MAN
LC   STN Files:   AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA,
       CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, EMBASE,
       IFICDB, IFIPAT, IFIUDB, PROMT, TOXLIT, USPATFULL
     Other Sources:   EINECS**, TSCA**
       (**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
          1576 REFERENCES IN FILE CA (1967 TO DATE)
            21 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
          1580 REFERENCES IN FILE CAPLUS (1967 TO DATE)


=> fil hcaplus
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FILE 'HCAPLUS' ENTERED AT 12:04:00 ON 18 OCT 2001

FILE COVERS 1947 - 18 Oct 2001 VOL 135 ISS 17
FILE LAST UPDATED: 17 Oct 2001 (20011017/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

This file supports REGistRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

HCAplus now provides online access to patents and literature covered in CA from 1947 to the present. On April 22, 2001, bibliographic information and abstracts were added for over 2.2 million references published in CA from 1947 to 1966.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d his l2-

(FILE 'REGISTRY' ENTERED AT 11:49:36 ON 18 OCT 2001)

FILE 'HCAPLUS' ENTERED AT 11:50:40 ON 18 OCT 2001

L2	1745	S L1 OR LYSOSOMAL ACID LIPASE OR ESTERASE (2A) CHOLESTEROL
L3	0	S LIPID HYDROLYAING (L) (PROTEIN# OR POLYPEPTIDE#)
L4	0	S LIPID HYDROLYZING (L) (PROTEIN# OR POLYPEPTIDE#)
L5	0	S LIPID(L) HYDROLYZING (L) (PROTEIN# OR POLYPEPTIDE#)
L6	11	S LIPID(L) HYDROLYZING (L) ENZYME?
L7	1754	S L2 OR L6
L8	36	S TARGET? (L) RECEPTOR (L) LYSOSOME?
L9	1	S L7 AND L8
L10	1486	S MANNOSE (L) RECEPTOR?
L11	6	S L7 AND L10
L12	22055	S ATHEROSCLEROSIS? OR ANTIARTERIOSCELER?
L13	24524	S ATHEROSCLEROSIS? OR ANTIARTERIOSCLER?
L14	24524	S L13 OR ANTIATHERIOSCLER?
L15	25226	S L13 OR ANTIATHEROSCLER?
L16	128	S L15 AND L7
L17	1	S L16 AND MANNOSE?
L18	46481	S VECTOR?
L19	1	S L16 AND L18
L20	15431	S ACETYLGLYCOSYL? OR LYSOSOME?
L21	25	S L20 AND L16
L22	6	S L9 OR L11 OR L17 OR L19
L23	69164	S GENE THERAPY OR DRUG DELIVER?
L24	2	S L16 AND L23
L25	123743	S MUTAT?
L26	128	S L16 AND L2
L27	3	S L16 AND L25
L28	243	S WOLMAN? OR CHOLESTER? (2A) STORAGE?
L29	4	S L28 AND L16
L30	470344	S DISEAS? OR DISORDER?

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L31          21 S L30 AND L16
L32      794880 S TREA? OR THERAP?
L33           4 S L31 AND L32
L34          14 S L22 OR L24 OR L27 OR L29 OR L33
L35          14 S L31 NOT L34

     FILE 'REGISTRY' ENTERED AT 12:03:53 ON 18 OCT 2001

     FILE 'HCAPLUS' ENTERED AT 12:04:00 ON 18 OCT 2001

=> d .ca l34 1-14;d ibib ab l35 1-14

L34  ANSWER 1 OF 14  HCAPLUS  COPYRIGHT 2001 ACS
ACCESSION NUMBER:         2001:581727 HCAPLUS
DOCUMENT NUMBER:          135:147445
TITLE:                    Use of lysosomal acid
                          lipase for treating
                          atherosclerosis and related diseases
INVENTOR(S):              Grabowski, Gregory A.; Du, Hong
PATENT ASSIGNEE(S):       Children's Hospital Research Foundation, USA
SOURCE:                   PCT Int. Appl., 61 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND  DATE          APPLICATION NO.   DATE
     ----------          ----  --------      --------------    --------
     WO 2001056596       A1    20010809      WO 2001-US3841    20010202
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
            HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
            LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
            SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,
            ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
            BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:                US 2000-180362    P  20000204
AB   The present invention comprises a method to diminish and/or eliminate
     atherosclerotic plaques, in mammals, through direct and indirect treatment
     of these plaques, in situ, using suitable substances which are capable of
     lipid removal, primarily through hydrolysis, either by a catalytic or
     stoichiometric process, wherein the substance targets receptors in and/or
     on the cell which lead to uptake into the lysosome.  Such substances used
     to diminish and/or eliminate atherosclerotic plaques are generally
     comprised of lipid hydrolyzing proteins and/or polypeptides.

IC   A61K038-46; A61K048-00; A61P009-10; A61P003-06
CC   1-10 (Pharmacology)
     Section cross-reference(s): 63
ST   lysosome acid lipase atherosclerosis treatment;
     lipid hydrolyzing enzyme
     atherosclerosis treatment
IT   Enzyme functional sites
       (N-linked acetylglycosylation residues; use of lysosomal
       acid lipase for treating
       atherosclerosis and related diseases by
       targeting receptor site for uptake into
       lysosomes)
IT   Disease, animal
       (Wolman's, treatment; use of lysosomal
       acid lipase for treating
```

atherosclerosis and related diseases by targeting receptor site for uptake into lysosomes)

IT Antiarteriosclerotics
(antiatherosclerotics; use of lysosomal acid lipase for treating atherosclerosis and related diseases by targeting receptor site for uptake into lysosomes)

IT Drug delivery systems
(controlled-release; use of lysosomal acid lipase for treating atherosclerosis and related diseases by targeting receptor site for uptake into lysosomes)

IT Adeno-associated virus
Adenoviridae
Lentivirus
(in genetic vector for lipid-hydrolyzing enzyme; use of lysosomal acid lipase for treating atherosclerosis and related diseases by targeting receptor site for uptake into lysosomes)

IT Drug delivery systems
(infusions, i.v.; use of lysosomal acid lipase for treating atherosclerosis and related diseases by targeting receptor site for uptake into lysosomes)

IT Drug delivery systems
(inhalants; use of lysosomal acid lipase for treating atherosclerosis and related diseases by targeting receptor site for uptake into lysosomes)

IT Drug delivery systems
(injections, i.p.; use of lysosomal acid lipase for treating atherosclerosis and related diseases by targeting receptor site for uptake into lysosomes)

IT Drug delivery systems
(injections; use of lysosomal acid lipase for treating atherosclerosis and related diseases by targeting receptor site for uptake into lysosomes)

IT Drug delivery systems
(lipid vesicles, for lipid-hydrolyzing enzyme gene therapy; use of lysosomal acid lipase for treating atherosclerosis and related diseases by targeting receptor site for uptake into lysosomes)

IT Genetic vectors
Plasmid vectors
Virus vectors
(lipid-hydrolyzing enzyme-contg.; use of lysosomal acid lipase for treating atherosclerosis and related diseases by targeting receptor site for uptake into lysosomes)

IT Gene, animal
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(lipid-hydrolyzing enzyme-encoding; use of lysosomal acid lipase for

treating atherosclerosis and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT **Enzymes**, biological studies
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**lipid-hydrolyzing**; use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT Gene, animal
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**lysosomal acid lipase**-encoding; use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT Lipids, biological studies
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(metabolic **disorders, cholesteryl** ester **storage disease, treatment**; use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT **Gene therapy**
(of **lipid-hydrolyzing enzyme**; use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT **Mutation**
(of **lysosomal acid lipase**; use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT Oligosaccharides, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(on **lysosomal acid lipase**, receptors for; use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT **Drug delivery** systems
(oral; use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT **Drug delivery** systems
(parenterals; use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT Peptides, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(receptors for; use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT **Drug delivery** systems
Lysosome
(use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT **Mannose receptors**
Receptors
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT 3458-28-4, **Mannose**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(on **lysosomal acid lipase**, **receptors** for; use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

IT **9026-00-0, Lysosomal acid lipase**
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(use of **lysosomal acid lipase** for **treating atherosclerosis** and related **diseases** by **targeting receptor** site for uptake into **lysosomes**)

REFERENCE COUNT: 6
REFERENCE(S):
(1) Du, H; AM J HUMAN GENET 1995, V57, PA178
(2) Du, H; HUMAN MOLECULAR GENETICS 1998, V7, P1347 HCAPLUS
(3) Escary; ARTERIOSCLER, THROMB, VASC BIOL 1998, V18(6), P991 HCAPLUS
(4) Reader; FASEB J 1996, V10, PA233
(5) Sheriff; J BIOL CHEM 1995, V270, P27766 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:411495 HCAPLUS
DOCUMENT NUMBER: 135:179631
TITLE: Profiling changes in gene expression during differentiation and maturation of monocyte-derived dendritic cells using both oligonucleotide microarrays and proteomics
AUTHOR(S): Le Naour, Francois; Hohenkirk, Lyndon; Grolleau, Annabelle; Misek, David E.; Lescure, Pascal; Geiger, James D.; Hanash, Samir; Beretta, Laura
CORPORATE SOURCE: Department of Microbiology and Immunology, University of Michigan, Ann Arbor, MI, 48109-0666, USA
SOURCE: J. Biol. Chem. (2001), 276(21), 17920-17931
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Dendritic cells (DCs) are antigen-presenting cells that play a major role in initiating primary immune responses. The authors have utilized two independent approaches, DNA microarrays and proteomics, to analyze the expression profile of human CD14+ blood monocytes and their derived DCs. Anal. of gene expression changes at the RNA level using oligonucleotide microarrays complementary to 6300 human genes showed that .apprx.40% of the genes were expressed in DCs. A total of 255 genes (4%) were regulated during DC differentiation or maturation. Most of these genes were not

previously assocd. with DCs and included genes encoding secreted proteins as well as genes involved in cell adhesion, signaling, and lipid metab. Protein anal. of the same cell populations was done using two-dimensional gel electrophoresis. A total of 900 distinct protein spots were included, and 4% of them exhibited quant. changes during DC differentiation and maturation. Differentially expressed proteins were identified by mass spectrometry and found to represent proteins with Ca2+ binding, fatty acid binding, or chaperone activities as well as proteins involved in cell motility. In addn., proteomic anal. provided an assessment of post-translational modifications. The chaperone protein, calreticulin, was found to undergo cleavage, yielding a novel form. The combined oligonucleotide microarray and proteomic approaches have uncovered novel genes assocd. with DC differentiation and maturation and has allowed anal. of post-translational modifications of specific proteins as part of these processes.

CC 15-10 (Immunochemistry)
Section cross-reference(s): 3, 13

IT **Mannose receptors**
RL: PRP (Properties)
(up-regulation of gene expression in differentiation and maturation of human dendritic cells)

IT 9000-83-3, ATPase 9001-05-2, Catalase 9004-02-8, Lipoprotein lipase 9014-51-1, Indoleamine-2,3-dioxygenase 9023-99-8, Cystathionine-.beta.-synthase **9026-00-0, Lysosomal acid lipase** 9026-09-9, Phenol sulfotransferase 9027-35-4, L-Arginine:glycine amidinotransferase 9029-97-4, 3-Oxoacyl-CoA thiolase 9030-42-6 9030-96-0, IsoleucyltRNA synthetase 9035-39-6, Cytochrome b5 9075-81-4, Sialyltransferase ST6GalI 80146-85-6, Transglutaminase 82249-77-2, 15-Lipoxygenase 87683-70-3, Pterin-4a-carbinolamine dehydratase 169592-54-5, Protease inhibitor 6
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(up-regulation of gene expression in differentiation and maturation of human dendritic cells)

REFERENCE COUNT: 53
REFERENCE(S):
(1) Arnold-Schild, D; J Immunol 1999, V162, P3757 HCAPLUS
(2) Ashkar, S; Science 2000, V287, P860 HCAPLUS
(4) Baggiolini, M; Int J Immunopharmacol 1995, V17, P103 HCAPLUS
(5) Bagnard, D; Development 1998, V125, P5043 HCAPLUS
(6) Banchereau, J; Annu Rev Immunol 2000, V18, P767 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2001:338762 HCAPLUS
DOCUMENT NUMBER: 134:362292
TITLE: Methods of determining individual hypersensitivity to a pharmaceutical agent from gene expression profile
INVENTOR(S): Farr, Spencer
PATENT ASSIGNEE(S): Phase-1 Molecular Toxicology, USA
SOURCE: PCT Int. Appl., 222 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001032928	A2	20010510	WO 2000-US30474	20001103

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,

HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-165398 P 19991105
US 2000-196571 P 20000411

AB The invention discloses methods, gene databases, gene arrays, protein arrays, and devices that may be used to det. the hypersensitivity of individuals to a given agent, such as drug or other chem., in order to prevent toxic side effects. In one embodiment, methods of identifying hypersensitivity in a subject by obtaining a gene expression profile of multiple genes assocd. with hypersensitivity of the subject suspected to be hypersensitive, and identifying in the gene expression profile of the subject a pattern of gene expression of the genes assocd. with hypersensitivity are disclosed. The gene expression profile of the subject may be compared with the gene expression profile of a normal individual and a hypersensitive individual. The gene expression profile of the subject that is obtained may comprise a profile of levels of mRNA or cDNA. The gene expression profile may be obtained by using an array of nucleic acid probes for the plurality of genes assocd. with hypersensitivity. The expression of the genes predetd. to be assocd. with hypersensitivity is directly related to prevention or repair of toxic damage at the tissue, organ or system level. Gene databases arrays and app. useful for identifying hypersensitivity in a subject are also disclosed.

IC ICM C12Q001-68
ICS G01N033-50

CC 3-4 (Biochemical Genetics)
Section cross-reference(s): 1, 6, 7, 13, 15

IT Gene, animal
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(**mannose receptor**; methods of detg. individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT **Mannose receptors**
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(methods of detg. individual hypersensitivity to a pharmaceutical agent from gene expression profile)

IT 107-97-1, Sarcosin 447-41-6, Nylidrin 8056-51-7 9000-86-6, Alanine aminotransferase 9000-97-9 9001-05-2, Catalase 9001-40-5, Glucose-6-phosphate dehydrogenase 9001-48-3, Glutathione reductase 9001-50-7, Glyceraldehyde 3-phosphate dehydrogenase 9001-62-1, Hepatic lipase 9001-84-7, Phospholipase A2 9002-03-3, Dihydrofolate reductase 9002-06-6, Thymidine kinase 9002-12-4, Urate oxidase 9002-67-9, Luteinizing hormone 9003-99-0, Myeloperoxidase 9012-25-3, Catechol-O-methyltransferase 9012-38-8, PAPS synthetase 9012-39-9 9012-52-6, S-Adenosylmethionine synthetase 9013-08-5, Phosphoenolpyruvate carboxykinase 9013-18-7, Fatty acyl-CoA synthetase 9013-38-1, Dopamine .beta.-hydroxylase 9013-66-5, Glutathione peroxidase 9013-79-0, Neuropathy target esterase 9014-55-5, Tyrosine aminotransferase 9015-71-8, Corticotropin releasing hormone 9015-81-0, 17-.beta. Hydroxysteroid dehydrogenase 9016-12-0, Hypoxanthine-guanine phosphoribosyltransferase 9023-44-3, Tryptophanyl-tRNA synthetase 9023-62-5, Glutathione synthetase 9023-64-7, .gamma.-Glutamylcysteinyl synthetase 9023-70-5, Glutamine synthetase 9024-60-6, Ornithine decarboxylase 9024-61-7, Histidine decarboxylase 9025-32-5, Prolidase **9026-00-0, Cholesterol esterase** 9026-09-9, Phenol sulfotransferase 9026-43-1, Serine kinase 9026-51-1, Nucleoside diphosphate kinase 9027-13-8, Enoyl-CoA hydratase 9027-65-0, Acyl-CoA dehydrogenase 9028-06-2 9028-31-3, Aldose reductase 9028-35-7, HMG

CoA reductase 9028-41-5, Hydroxyacyl-Coenzyme A dehydrogenase 9028-86-8, Aldehyde dehydrogenase 9029-73-6, Phenyl alanine hydroxylase 9029-80-5, Histamine N-methyltransferase 9029-97-4, 3-Ketoacyl-CoA thiolase 9031-37-2, Ceruloplasmin 9031-54-3, Sphingomyelinase 9031-61-2, Thymidylate synthase 9031-72-5, Alcohol dehydrogenase 9032-20-6, DT-Diaphorase 9035-58-9, Blood-coagulation factor III 9036-22-0, Tyrosine hydroxylase 9037-21-2, Tryptophan hydroxylase 9037-62-1, Glycyl tRNA synthetase 9039-06-9, NADPH cytochrome P450 reductase 9040-57-7, Ribonucleotide reductase 9041-92-3 9045-77-6, Fatty acid synthase 9046-27-9, .gamma.-Glutamyl transpeptidase 9048-63-9, Epoxide hydrolase 9055-67-8, Poly(ADP-ribose)polymerase 9059-25-0, Lysyl oxidase 9068-41-1, Carnitine palmitoyltransferase 9074-02-6, Malic enzyme 9074-10-6, Biliverdin reductase 9074-19-5, Hydratase 9074-87-7, .gamma.-Glutamyl hydrolase 9081-36-1, 25-Hydroxyvitamin D3 1-hydroxylase 11096-26-7, Erythropoietin 37205-63-3, ATP synthase 37237-44-8, Glucosylceramide synthase 37289-06-8, Acid ceramidase 37318-49-3, Protein disulfide isomerase 39391-18-9, Prostaglandin H synthase 52228-01-0 56093-23-3, .alpha.-1,2-Fucosyl transferase 56645-49-9, Cathepsin G 59536-73-1, Phosphomannomutase 59536-74-2, Very long-chain acyl-CoA dehydrogenase 60267-61-0, Ubiquitin 60616-82-2, Cathepsin L 61116-22-1, Fatty acyl-CoA oxidase 62229-50-9, Epidermal growth factor 67339-09-7, Thiopurine methyltransferase 67763-96-6, Insulin-like growth factor 1 67763-97-7, Insulin-like growth factor II 77271-19-3, 6-O-Methylguanine-DNA methyltransferase 77847-96-2, Prostacyclin-stimulating factor 79747-53-8, Protein tyrosine phosphatase 79955-99-0, Stromelysin-1 80146-85-6, Tissue Transglutaminase 80295-41-6, Complement component C3 81627-83-0, Colony stimulating factor -1 82391-43-3, 12-Lipoxygenase 83268-44-4 83869-56-1, Granulocyte-macrophage colony-stimulating factor 85637-73-6, Atrial natriuretic factor 87397-91-9, Thymosin .beta.10 88943-21-9, Proteinase .alpha.1-inhibitor III 89964-14-7, Prothymosin, alpha 90698-26-3, Ribosomal protein S6 kinase 92767-51-6, O-6-Alkylguanine-DNA-alkyltransferase 96024-44-1, Granulin 105238-46-8, Macropain 106096-92-8, Fibroblast growth factor, acidic 106956-32-5, Oncostatin M 112130-98-0, Procathepsin L 114949-22-3, Activin (protein) 117698-12-1, Paraoxonase 119418-04-1, Galanin 123626-67-5, Endothelin-1 125978-95-2, Nitric oxide synthase 127464-60-2, Vascular endothelial growth factor 137632-07-6, Extracellular-signal-regulated kinase 1 138238-81-0, Endothelin converting enzyme-1 140208-24-8, Tissue inhibitor of metalloproteinase-1 141176-92-3 141349-86-2, Cyclin dependent kinase 2 141436-78-4, Protein kinase C 142243-03-6, Plasminogen activator inhibitor 2 142805-56-9, DNA topoisomerase II 142805-58-1, MAP kinase kinase 143180-75-0, DNA topoisomerase I 143375-65-9, Cyclin dependent kinase 1 145809-21-8, Tissue inhibitor of metalloproteinase-3 146480-35-5, Matrix metalloproteinase-2 147014-97-9, Cyclin dependent kinase 4 148348-15-6, Fibroblast growth factor 7 149316-81-4, Branched chain acyl-CoA oxidase 149371-05-1, Kinase (phosphorylating), gene c-abl protein 149885-78-9, Hepatocyte growth factor activator 154907-65-0, Checkpoint kinase 155807-64-0, FEN-1 Endonuclease 165245-96-5, p38 Mitogen-activated protein kinase 169592-56-7, CPP32 proteinase 179241-70-4, Protein kinase ZPK 179241-78-2, Caspase 8 182372-14-1, Caspase 2 182372-15-2, Caspase 6 182762-08-9, Caspase 4 187414-12-6, Caspase-1 189258-14-8, Caspase 7 192465-11-5, Caspase 5 193363-12-1, Vascular endothelial growth factor D 194554-71-7, Tissue factor pathway inhibitor 205944-50-9, Osteoprotegerin 220983-94-8, Sorbitol dehydrogenase 289898-51-7, JNK1 protein kinase 303752-61-6, DNA dependent protein kinase 329736-03-0, Cytochrome p450 3A4 329764-85-4, Cytochrome p450 1A1 329900-75-6, Cyclooxygenase 2 329978-01-0, Cytochrome p450 2C9 330196-64-0, Cytochrome p450 1A2 330196-93-5, Cytochrome p450 2E1 330197-98-3, Cytochrome p 450 11A1 330207-10-8, Cytochrome p450 2B1 330589-90-7, Cytochrome p450 2C19 330596-22-0, Cytochrome p450 1B1 330597-62-1,

Cytochrome p450 2D6 330975-22-9, Macrostatin 331462-97-6, Cytochrome p450 2B2 331462-98-7, Cytochrome p450 3A1 331823-00-8, Cytochrome p450 2C11 331823-12-2, Cytochrome p450 2C12 331823-27-9, Cytochrome p450 2A1 331827-06-6, Cytochrome p450 2A6 332847-52-6, Cytochrome p450 4A 336884-26-5, Cytochrome p450 2B10 338964-08-2, P 450 17A 338969-62-3, P 450 2A3 338969-69-0, P 450 2F2 338969-71-4, P 450 4A1
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(methods of detg. individual hypersensitivity to a pharmaceutical agent from gene expression profile)

L34 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:582072 HCAPLUS
DOCUMENT NUMBER: 132:120869
TITLE: Splice-site **mutations** in **atherosclerosis** candidate genes: relating individual information to phenotype
AUTHOR(S): Von Kodolitsch, Yskert; Pyeritz, Reed E.; Rogan, Peter K.
CORPORATE SOURCE: Department of Cardiology, University Hospital Eppendorf, Hamburg, Germany
SOURCE: Circulation (1999), 100(7), 693-699
CODEN: CIRCAZ; ISSN: 0009-7322
PUBLISHER: Lippincott Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Nucleotide variants in several genes for lipid and methionine metab. influence the risk of premature atherosclerosis. Ten percent of single nucleotide substitutions in these genes involve mRNA splice sites. The effects of some of these changes on splicing and on phenotypic severity are not inherently obvious. Using an information theory-based model, the individual information content (Ri, in bits) of splice sites adjacent to 289 mutations (including 31 splice-site mutations) in the atherosclerosis candidate genes APOAII, APOB, APOCII, APOE, CBS, CETP, LCAT, LIPA, LDLR, and LPL was measured. The predictions of information anal. were then corroborated by published mRNA analyses. The Ri values of mutant sites were consistent with either complete or partial inactivation of these sites. Seven mutations were predicted to activate cryptic splice sites. Predicted inactive mutant sites were assocd. with either "av." or "severe" dyslipidemia and commensurate redns. in protein levels or activity, whereas mutations expected to exhibit residual splicing had av. or "mild" effects on lipid and protein expression. Information anal. of splice-junction variants in atherosclerosis candidate genes distinguishes inactive from leaky splice sites and identifies activated cryptic sites. Predicted changes in splicing were related to phenotypic severity.

CC 14-5 (Mammalian Pathological Biochemistry)
Section cross-reference(s): 3

ST gene **atherosclerosis** splice site **mutation** phenotype

IT Apolipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(A-II, gene; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)
(APOAII; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)
(APOB; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BPR (Biological process);

PRP (Properties); BIOL (Biological study); PROC (Process)
(APOCII; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)
(APOE; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Apolipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(B, gene; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Apolipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(C-II, gene; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)
(CBS; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)
(CETP; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Apolipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(E, gene; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)
(LCAT; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Lipoprotein receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(LDL, gene; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)
(LDLR; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)
(LIPA; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Gene, animal
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)
(LPL; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Proteins, specific or class
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cholesterol ester-exchanging, gene; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

IT Lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(low-d., gene; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to

phenotype)
IT RNA splicing
(messenger; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)
IT **Mutation**
(splice site; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)
IT **Atherosclerosis**
Mutation
Phenotypes
Risk assessment
Transcription, genetic
(splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)
IT mRNA
RL: PRP (Properties)
(splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)
IT Pre-mRNA
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(splicing; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)
IT 9023-99-8, Cystathionine .beta.-synthase **9026-00-0**, **Lysosomal acid lipase** 9031-14-5, Lecithin cholesterol acyltransferase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gene; splice-site **mutations** in **atherosclerosis** candidate genes in humans in relation to phenotype)

REFERENCE COUNT: 45
REFERENCE(S):
(1) Brown, M; Nature 1989, V342, P448 HCAPLUS
(2) Bruin, T; J Lipid Res 1993, V34, P2109 HCAPLUS
(3) Chimienti, G; Biochem Biophys Res Commun 1992, V187, P620 HCAPLUS
(4) Cladaras, C; J Biol Chem 1987, V262, P2310 HCAPLUS
(5) Day, I; Hum Mutat 1997, V10, P116 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:246744 HCAPLUS
DOCUMENT NUMBER: 131:86054
TITLE: Cholesteryl ester hydrolase deficiency
AUTHOR(S): Maslen, C. L.; Illingworth, D. R.
CORPORATE SOURCE: Division of Endocrinology, Diabetes & Clinical Nutrition, Oregon Health Sciences University, Portland, OR, USA
SOURCE: Lipoproteins Health Dis. (1999), 847-861. Editor(s): Betteridge, D. J.; Illingworth, D. Roger; Shepherd, James. Arnold: London, UK.
CODEN: 67OGA9
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English

AB A review, with 94 refs. Topics discussed include: clin. features, tissue and plasma lipid profiles, genetics, and diagnosis of cholesteryl ester hydrolase deficiency, genetic variation of cholesteryl ester hydrolase activity and premature atherosclerosis, clin. intervention, and animal model.

CC 14-0 (Mammalian Pathological Biochemistry)
ST review **Wolman** disease clin feature genetics diagnosis intervention; cholesterol ester hydrolase deficiency review
IT Disease models
(**Wolman**'s disease; clin. features, diagnosis, and genetics of and interventions for human cholesteryl ester hydrolase deficiency)

IT Disease, animal
(**Wolman**'s; clin. features, diagnosis, and genetics of and interventions for human cholesteryl ester hydrolase deficiency)

IT **Atherosclerosis**
Diagnosis
Genetics
(clin. features, diagnosis, and genetics of and interventions for human cholesteryl ester hydrolase deficiency)

IT **9026-00-0**, Cholesteryl ester hydrolase
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(clin. features, diagnosis, and genetics of and interventions for human cholesteryl ester hydrolase deficiency)

REFERENCE COUNT: 20
REFERENCE(S):
(1) Rothschild, C; Genomics 1992, V13, P25 HCAPLUS
(2) Sando, G; Journal of Biological Chemistry 1985, V260, P15186 HCAPLUS
(5) Seedorf, U; Arteriosclerosis Thrombosis and Vascular Biology 1995, V15, P773 HCAPLUS
(6) Sheriff, S; Journal of Biological Chemistry 1995, V270, P27766 HCAPLUS
(12) Warner, T; Journal of Biological Chemistry 1981, V256, P2952 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:412362 HCAPLUS
DOCUMENT NUMBER: 129:197833

TITLE: Hormone-sensitive lipase overexpression increases cholesteryl ester hydrolysis in macrophage foam cells

AUTHOR(S): Escary, Jean-Louis; Choy, Henry A.; Reue, Karen; Schotz, Michael C.
CORPORATE SOURCE: Lipid Research Laboratory, West Los Angeles VA Medical Center, University of California, Los Angeles, CA, 90073, USA

SOURCE: Arterioscler., Thromb., Vasc. Biol. (1998), 18(6), 991-998
CODEN: ATVBFA; ISSN: 1079-5642
PUBLISHER: Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Atherosclerosis is a complex physiopathol. process initiated by the formation of cholesterol-rich lesions in the arterial wall. Macrophages play a crucial role in this process because they accumulate large amts. of cholesterol esters (CEs) to form the foam cells that initiate the formation of the lesion and participate actively in the development of the lesion. Therefore, prevention or reversal of CE accumulation in macrophage foam cells could result in protection from multiple pathol. effects. In this report, we show that the CE hydrolysis catalyzed by neutral cholesterol ester hydrolase (nCEH) can be modulated by overexpression of hormone-sensitive lipase (HSL) in macrophage foam cells. For these studies, RAW 264.7 cells, a murine macrophage cell line, were found to be a suitable model of foam cell formation. HSL expression and nCEH activity in these cells and in peritoneal macrophages were comparable. In addn., antibody titrn. showed that essentially all nCEH activity in murine macrophages was accounted for by HSL. To examine the effect of HSL overexpression on foam cell formation, RAW 264.7 cells were stably transfected with a rat HSL cDNA. The resulting HSL overexpression increased hydrolysis of cellular CEs 2- to 3-fold in lipid-laden cells in the presence of an acyl CoA:cholesterol acyltransferase (ACAT) inhibitor. Furthermore, addn. of cAMP produced a 5-fold higher rate of CE hydrolysis in cholesterol-laden, HSL-overexpressing cells than in control cells and resulted in nearly complete hydrolysis of cellular CEs in only 9 h, compared with <50% hydrolysis in control cells. Thus, HSL overexpression

stimulated the net hydrolysis of CEs, leading to faster hydrolysis of lipid deposits in model foam cells. These data suggest that HSL overexpression in macrophages, alone or in combination with ACAT inhibitors, may constitute a useful therapeutic approach for impeding CE accumulation in macrophages in vivo.

CC 1-10 (Pharmacology)
Section cross-reference(s): 3

ST **atherosclerosis gene therapy** cholesterol metab macrophage; cholesteryl esterase lipase expression **gene therapy**

IT **Antiatherosclerotics**
Anticholesteremic agents
Atherosclerosis
Gene expression
Gene therapy
Macrophage
(hormone-sensitive lipase overexpression increases cholesteryl ester hydrolysis in macrophage foam cells in relation to **atherosclerosis** therapy)

IT Blood cholesterol
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(hormone-sensitive lipase overexpression increases cholesteryl ester hydrolysis in macrophage foam cells in relation to **atherosclerosis** therapy)

IT 9001-62-1, Lipase
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hormone-sensitive lipase overexpression increases cholesteryl ester hydrolysis in macrophage foam cells in relation to **atherosclerosis** therapy)

IT 57-88-5D, Cholesterol, esters **9026-00-0**, Neutral cholesteryl ester hydrolase
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(hormone-sensitive lipase overexpression increases cholesteryl ester hydrolysis in macrophage foam cells in relation to **atherosclerosis** therapy)

IT 9027-63-8, Cholesterol acyltransferase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitors; hormone-sensitive lipase overexpression increases cholesteryl ester hydrolysis in macrophage foam cells in relation to **atherosclerosis** therapy)

L34 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1998:223121 HCAPLUS
DOCUMENT NUMBER: 128:307050
TITLE: Immunohistochemical demonstration of enzymically modified human LDL and its colocalization with the terminal complement complex in the early atherosclerotic lesion
AUTHOR(S): Torzewski, Michael; Klouche, Mariam; Hock, Johann; Messner, Martina; Dorweiler, Bernhard; Torzewski, Jan; Gabbert, Helmut Erich; Bhakdi, Sucharit
CORPORATE SOURCE: Institute of Pathology, University of Dusseldorf, Dusseldorf, Germany
SOURCE: Arterioscler., Thromb., Vasc. Biol. (1998), 18(3), 369-378
CODEN: ATVBFA; ISSN: 1079-5642
PUBLISHER: Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Treatment of low d. lipoprotein (LDL) with degrading enzymes transforms the mol. to a moiety that is micromorphol. indistinguishable from lipoproteinaceous particles that are present in atherosclerotic plaques,

and enzymically modified LDL (E-LDL), but not oxidized LDL (ox-LDL), spontaneously activates the alternative complement pathway, as do lesion lipoprotein derivs. Furthermore, because E-LDL is a potent inducer of macrophage foam cell formation, the authors propose that enzymic degrdn. may be the key process that renders LDL atherogenic. In this article, the authors report the prodn. of two murine monoclonal antibodies recognizing cryptic epitopes in human apolipoprotein B that become exposed after enzymic attack on LDL. One antibody reacted with LDL after single treatment with trypsin, whereas recognition by the second antibody required combined treatment of LDL with trypsin and cholesterol esterase. In ELISAs, both antibodies reacted with E-LDL produced in vitro and with lesion complement activator derived from human atherosclerotic plaques, but they were unreactive with native LDL or ox-LDL. The antibodies stained E-LDL, but not native LDL or ox-LDL, that had been artificially injected into arterial vessel walls. With the use of these antibodies, the authors have demonstrated that early human atherosclerotic coronary lesions obtained at autopsy as well as lesions examd. in freshly explanted hearts always contain extensive extracellular deposits of E-LDL. Terminal complement complexes, detected with a monoclonal antibody specific for a C5b-9 neoepitope, colocalized with E-LDL within the intima, which is compatible with the proposal that subendothelially deposited LDL is enzymically transformed to a complement activator at the earliest stages in lesion development.

CC 14-5 (Mammalian Pathological Biochemistry)
Section cross-reference(s): 15

IT Coronary artery **disease**
(**atherosclerosis**; immunohistochem. demonstration of enzymically modified human LDL and colocalization with terminal complement complex in early atherosclerotic lesion)

IT **Atherosclerosis**
(coronary; immunohistochem. demonstration of enzymically modified human LDL and colocalization with terminal complement complex in early atherosclerotic lesion)

IT **Atherosclerosis**
(plaque; immunohistochem. demonstration of enzymically modified human LDL and colocalization with terminal complement complex in early atherosclerotic lesion)

IT 9002-07-7, Trypsin **9026-00-0, Cholesterol esterase**
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(LDL **treated** with; immunohistochem. demonstration of enzymically modified human LDL and colocalization with terminal complement complex in early atherosclerotic lesion)

L34 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:280151 HCAPLUS
DOCUMENT NUMBER: 126:315913
TITLE: Altered mononuclear phagocyte differentiation associated with genetic defects of the **lysosomal acid lipase**
AUTHOR(S): Rothe, Gregor; Stohr, Josef; Fehringer, Petra; Gasche, Christoph; Schmitz, Gerd
CORPORATE SOURCE: Institute for Clinical Chemistry and Laboratory Medicine, University of Regensburg, Regensburg, D-93042, Germany
SOURCE: Atherosclerosis (Shannon, Irel.) (1997), 130(1,2), 215-221
CODEN: ATHSBL; ISSN: 0021-9150
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Multiparameter flow cytometry reveals a complex heterogeneity of

mononuclear phagocyte differentiation within the peripheral blood compartment. In this study, the relation of abnormal cellular lipid metab. to the phenotype of peripheral blood mononuclear phagocytes, which finally may be related to atherogenesis, was analyzed using recently characterized autosomal recessive defects of lysosomal acid lipase (LAL) expression as model system. The redn. of LAL activity in nine heterozygote, disease free carriers of mutations from two cholesteryl ester storage disease (CESD) pedigrees and the family of a patient with Wolman disease was assocd. with an increased fraction of monocytes which expressed CD56 (N-CAM) (4.1% of monocytes, compared to 2.2% in ten controls), an antigen characteristic of immature myeloid cells, suggesting an increased turnover of monocytes. Furthermore, a trend was obsd. towards an enhanced blood pool of more mature mononuclear phagocytes which show decreased expression of the 55 kDa lipopolysaccharide receptor (CD14) together with either expression of the Fc-.gamma.-receptor III (CD16) or a high expression of CD33. A similar phenotype of peripheral mononuclear phagocytes was obsd. in the two CESD patients analyzed. In conclusion, the authors' data suggest that these monogenetic defects of lysosomal lipoprotein metab. are assocd. with complex alterations of mononuclear phagocyte differentiation and extravasation.

CC 14-14 (Mammalian Pathological Biochemistry)
Section cross-reference(s): 3

ST mononuclear phagocyte differentiation **lysosomal acid lipase**

IT CD antigens
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(CD33; altered mononuclear phagocyte differentiation assocd. with genetic defects of human **lysosomal acid lipase** in relation to myeloid proteins, **cholesteryl** ester **storage** disease, **Wolman** disease, and atherogenesis)

IT Lipid metabolic diseases
(**Wolman**'s disease; altered mononuclear phagocyte differentiation assocd. with genetic defects of human **lysosomal acid lipase** in relation to myeloid proteins, **cholesteryl** ester **storage** disease, **Wolman** disease, and atherogenesis)

IT **Atherosclerosis**
Heterozygosity
Monocyte
Monocytopoiesis
Mononuclear phagocyte
Mutation
Myeloid precursor cell
(altered mononuclear phagocyte differentiation assocd. with genetic defects of human **lysosomal acid lipase** in relation to myeloid proteins, **cholesteryl** ester **storage** disease, **Wolman** disease, and atherogenesis)

IT Fc.gamma.RIII receptors
Lipopolysaccharide-binding protein
N-CAM (cell adhesion molecule)
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(altered mononuclear phagocyte differentiation assocd. with genetic defects of human **lysosomal acid lipase** in relation to myeloid proteins, **cholesteryl** ester **storage** disease, **Wolman** disease, and atherogenesis)

IT Lipid metabolic diseases
(**cholesterol** ester **storage** disease; altered mononuclear phagocyte differentiation assocd. with genetic defects of human **lysosomal acid lipase** in relation to myeloid proteins and)

IT **9026-00-0, Cholesterol esterase**
RL: ADV (Adverse effect, including toxicity); BOC (Biological occurrence); PRP (Properties); BIOL (Biological study); OCCU (Occurrence)
(altered mononuclear phagocyte differentiation assocd. with genetic defects of human **lysosomal acid lipase** in relation to myeloid proteins, **cholesteryl** ester **storage** disease, **Wolman** disease, and atherogenesis)

L34 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:383196 HCAPLUS
DOCUMENT NUMBER: 125:56240
TITLE: Complementarily bonded two- and three-dimensional supramolecular structures
INVENTOR(S): Virtanen, Jorma; Virtanen, Sinikka
PATENT ASSIGNEE(S): Burstein Laboratories, Inc., USA
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9613522	A1	19960509	WO 1995-US13990	19951030
W: AL, AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, UZ, VN				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2203875	AA	19960509	CA 1995-2203875	19951030
AU 9641973	A1	19960523	AU 1996-41973	19951030
EP 789715	A1	19970820	EP 1995-940569	19951030
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10508304	T2	19980818	JP 1995-514797	19951030

PRIORITY APPLN. INFO.: US 1994-332514 19941031
WO 1995-US13990 19951030

AB The present invention relates to supramols. which are formed by at least two components. Each component comprises an effector mol. and at least one nucleic acid chain. The nucleic acid chains of each component are complementary to nucleic acid chains on other components and thus are able to bind the components of the supramol. by the formation of double stranded nucleic acid chains between the complementary chains. The present invention also relates to a method of making the supramols. of the present invention. The nucleic acid chains are preferably DNA, RNA, and may also contain structural analogs of DNA or RNA. Effector mols. that may be used to form the supramols. include, but are not limited to polypeptides, lipids, sugars. These effector mols. may impart chem., phys. properties to the supramol. that include, but are not limited to hydrophobicity, hydrophilicity, electron cond., fluorescence, radioactivity, biol. activity, cellular toxicity, catalytic activity, mol. and cellular recognition and in vivo transport selectivity. The supramol. is useful for electronics, immunoassay, and diagnosis and treatment of disease, e.g. cancer, atherosclerosis, virus infection. Demonstrated in example was prepn. of supramol. contg. monoclonal anti-gp41/160 antibody, oligonucleotide and enzyme such as phospholipase A2, lipase, RNase and carboxypeptidase for capturing virus particles.

IC ICM C07K016-00
ICS C07K017-00; C07K017-14

CC 15-3 (Immunochemistry)
Section cross-reference(s): 3

IT Neoplasm

(marker protein; supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

IT Virus
(protein; supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

IT Molecules
(supra-; supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

IT Antibodies
Enzymes
Ligands
Nucleic acids
Receptors
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(supramol.; supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

IT Proteins, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(virus; supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

IT Antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(CD4, supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

IT Arteriosclerosis
(**atherosclerosis**, supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

IT Glycoproteins, specific or class
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gp160, supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

IT Glycoproteins, specific or class
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(gp41, supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

IT Antibodies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(monoclonal, to gp41/160; supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

IT Virus, animal
(retro-, supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

IT 9001-84-7P, Phospholipase A2 9001-99-4P, RNase 9031-98-5P, Carboxypeptidase
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

IT 9001-62-1P, Lipase 9013-93-8P, Phospholipase **9026-00-0P**, **Cholesterol esterase** 9026-81-7P, Nuclease
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(supramol.; supramol. contg. antibody and oligonucleotide and enzyme for electronics, immunoassay, and **disease** diagnosis and **treatment**)

L34 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1991:628985 HCAPLUS
DOCUMENT NUMBER: 115:228985
TITLE: Acid hydrolases in early and late endosome fractions from rat liver
AUTHOR(S): Runquist, Elizabeth A.; Havel, Richard J.
CORPORATE SOURCE: Cardiovasc. Res. Inst., Univ. California, San Francisco, CA, 94143-0130, USA
SOURCE: J. Biol. Chem. (1991), 266(33), 22557-63
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The distribution of the cation-independent mannose 6-phosphate receptor and 5 acid hydrolases was examd. in early and late endosomes and a receptor-recycling fraction isolated from livers of estradiol-treated rats. Enrichment of mannose 6-phosphate receptor mass relative to that of crude liver membranes was comparable in membranes of early and late endosomes but was even greater in membranes of the receptor-recycling fraction. Enrichment of acid hydrolase activities (aryl sulfatase, N-acetyl-.beta.-glucosaminidase, tartrate-sensitive acid phosphatase, and cholesteryl ester acid hydrolase) and cathepsin D mass was also comparable in early and late endosomes but was considerably lower in the receptor-recycling fraction. The enrichment of 2 acid hydrolases, acid phosphatase and cholesteryl ester acid hydrolase, in endosomes was severalfold greater than that of the other 3 examd., .apprx.40% of that found in lysosomes. Acid phosphatase and cholesteryl ester acid hydrolase were partially assocd. with endosome membranes, whereas cathepsin D was found entirely in the endosome contents. These findings raise the possibility that lysosomal enzymes traverse early endosomes during transport to lysosomes in rat hepatocytes and suggest that the greater enrichment of some acid hydrolases in endosomes is related to their assocn. with endosome membranes. Despite the substantial enrichment of lysosomal enzymes in hepatocytic endosomes, it was found that 2, cholesteryl ester acid hydrolase and cathepsin D, did not degrade cholesteryl esters and apolipoprotein B-100 of endocytosed low-d. lipoproteins in vivo, presumably because they are inactive at the pH within endosomes.
CC 13-1 (Mammalian Biochemistry)
IT **Receptors**
RL: BIOL (Biological study)
(for **mannose** phosphate, of early and late endosomes of liver)
IT 9012-33-3, .beta.-N-Acetylglucosaminidase 9016-17-5, Aryl sulfatase 9025-26-7, Cathepsin D **9026-00-0**
RL: BIOL (Biological study)
(of early and late endosomes, of liver)
IT 3672-15-9, **Mannose** 6-phosphate
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**receptors**, of early and late endosomes of liver)

L34 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1991:444672 HCAPLUS
DOCUMENT NUMBER: 115:44672
TITLE: Cholesterol esterases
AUTHOR(S): Fujiyama, Jiro; Kuriyama, Masaru

CORPORATE SOURCE: Med. Sch., Kagoshima Univ., Kagoshima, Japan
SOURCE: Lipid (1991), 2(1), 33-42
CODEN: LIPDET
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

AB A review with 35 refs., on cholesterol esterases (CE), including acid, neutral, and pancreatic CE, discussing their reaction kinetics, regulation, detn., and function (esp. in cholesterol metab.) and clin. significance in diseases such as cholesterol ester storage disease, atherosclerosis, etc.

CC 7-0 (Enzymes)
Section cross-reference(s): 14

ST review **cholesterol esterase**; disease **cholesterol esterase** review

IT **Atherosclerosis**
(**cholesterol esterase** in)

IT Xanthomatosis
(**Wolman**'s disease, **cholesterol esterase** in)

IT Lipids, biological studies
RL: BIOL (Biological study)
(metabolic disorders, **cholesterol** ester **storage** disease, **cholesterol esterase** in)

IT **9026-00-0, Cholesterol esterase**
RL: BIOL (Biological study)
(properties and function and clin. significance of)

L34 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1991:21353 HCAPLUS
DOCUMENT NUMBER: 114:21353
TITLE: Intercellular transport of **lysosomal acid lipase** mediates lipoprotein cholesteryl ester metabolism in a human vascular endothelial cell-fibroblast coculture system
AUTHOR(S): Sando, Gloria N.; Ma, Guo Ping; Lindsley, Kathy A.; Wei, Yu Ping
CORPORATE SOURCE: Cent. Res., Univ. Iowa, Iowa City, IA, 52242, USA
SOURCE: Cell Regul. (1990), 1(9), 661-74
CODEN: CELREQ; ISSN: 1044-2030
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Results are presented from studies of human cell culture models to support the premise that the extracellular transport of lysosomal acid lipase has a function in lipoprotein cholesteryl ester metab. in vascular tissue. Vascular endothelial cells secreted a higher fraction of cellular acid lipase than did smooth muscle cells and fibroblasts. Acid lipase and lysosomal .beta.-hexosaminidase were secreted at approx. the same rate from the apical and basolateral surface of an endothelial cell monolayer. Stimulation of secretion with NH4Cl did not affect the polarity. The ability of secreted endothelial lipase to interact with connective tissue cells and influence lipoprotein cholesterol metab. was studied in a coculture system in which endothelial cells on a micropore filter were suspended above a monolayer of acid lipase-deficient (Wolman disease) fibroblasts. After 5-7 days acid lipase activity in the fibroblasts reached 10%-20% of the level in normal cells; cholesteryl esters that had accumulated from growth in serum were cleared. Addn. of mannose 6-phosphate to the coculture medium blocked acid lipase uptake and cholesterol clearance, indicating that lipase released from endothelial cells was packaged into fibroblast lysosomes by a phosphomannosyl receptor-mediated pathway. Supplementation of the coculture medium with serum was not required for lipase uptake and cholesteryl ester hydrolysis by the fibroblasts, but was necessary for cholesterol clearance. Results from the coculture model suggest that acid lipase may be transported from

intact endothelium to cells in the lumen or the wall of a blood vessel. It is postulated that delivery of acid hydrolases and lipoproteins to a common endocytic compartment may occur and have an impact on cellular lipoprotein processing.

CC 13-2 (Mammalian Biochemistry)

IT **Receptors**
RL: BIOL (Biological study)
(**mannose** phosphate, acid lipase intercellular transport mediated by, in human fibroblast)

L34 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1987:547123 HCAPLUS
DOCUMENT NUMBER: 107:147123
TITLE: Cholestyramine **treatment** in early life of low-density lipoprotein receptor deficient Watanabe rabbits: decreased aortic cholesteryl ester accumulation and **atherosclerosis** in adult life
AUTHOR(S): Subbiah, M. T. R.; Yunker, R. L.; Rymaszewski, Z.; Kottke, B. A.; Bale, L. K.
CORPORATE SOURCE: Med. Cent., Univ. Cincinnati, Cincinnati, OH, USA
SOURCE: Biochim. Biophys. Acta (1987), 920(3), 251-8
CODEN: BBACAQ; ISSN: 0006-3002
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effect of cholestyramine treatment in the early life of heritable hyperlipidemic rabbits (an animal model lacking low-d. lipoprotein receptor activity) on subsequent (6 mo recovery) occurrence of natural atherosclerotic lesion and arterial cholesterol metab. was investigated. These results show that early cholestyramine pre-treatment in a low-d. lipoprotein receptor-deficient animal model causes persistent changes which might influence cholesteryl ester accumulation and atherogenesis in adult life, even after cholestyramine treatment is discontinued.

CC 1-10 (Pharmacology)

ST cholestyramine **atherosclerosis** lipoprotein receptor deficiency; aorta cholesteryl ester cholestyramine; hypercholesterolemia cholestyramine

IT Receptors
RL: BIOL (Biological study)
(for low-d. lipoproteins, deficiency of, cholestyramine effect on **atherosclerosis** and cholesteryl ester accumulation in)

IT **Atherosclerosis**
(**treatment** of, with cholestyramine)

IT Lipoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(low-d., receptors, deficiency of, cholestyramine effect on aortic cholesteryl ester accumulation and **atherosclerosis** in)

IT 11041-12-6, Cholestyramine
RL: BIOL (Biological study)
(**atherosclerosis** and aortic cholesteryl ester accumulation response to, in familial hypercholesterolemia)

IT 57-88-5, Cholesterol, biological studies
RL: BIOL (Biological study)
(metabolic **disorders**, familial hypercholesterolemia, cholestyramine effect on aortic cholesteryl ester accumulation and **atherosclerosis** in)

IT **9026-00-0, Cholesterol esterase**
RL: BIOL (Biological study)
(neutral, cholestyramine effect on, in familial hypercholesterolemia)

L34 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1984:452670 HCAPLUS
DOCUMENT NUMBER: 101:52670

TITLE: A study on the erythrocyte structures involved in the interaction with mannose-resistant E. coli adhesins

AUTHOR(S): Chiarini, F.; Mastromarino, P.; Seganti, L.; Orsi, N.

CORPORATE SOURCE: Fac. Med. Chirur., Univ. Roma "La Sapienza", Rome, 00100, Italy

SOURCE: Boll. Ist. Sieroter. Milan. (1983), 62(5), 420-5
CODEN: BISMAP; ISSN: 0021-2547

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The chem. groups of human group A erythrocytes responsible for binding mannose-resistant (MR) adhesins of uropathogenic Escherichia coli were investigated. Chymotrypsin and papain reduced hemagglutination by E. coli, whereas trypsin had no effect. Phospholipases (A2, C, and D) decreased the hemagglutination, but cholesterol esterase increased it 3-6-fold. Neuraminidase treatment increased the E. coli affinity of the erythrocytes; removal of galactose and fucose returned the affinity to control values. In addn. to the enzymic degrdn. studies, a series of competition expts. was conducted. The effects of human serum proteins, phospholipids, cholesterol, and carbohydrates on hemagglutination were compared. Several protein fractions inhibited E. coli binding to erythrocytes; none of the lipids tested were inhibitory, and 2 lipids (phosphatidylcholine and cholesterol) appeared to stimulate binding. Of the sugars tested, only .alpha.-Me-D-glucoside and D-glucose inhibited hemagglutination. The implications of these observations with respect to the properties of the adhesin receptor on the erythrocyte membrane are discussed.

CC 14-3 (Mammalian Pathological Biochemistry)

IT **Receptors**
RL: PROC (Process)
(for Escherichia coli **mannose**-resistant adhesin, of erythrocytes of humans, characterization of)

IT Escherichia coli
(**mannose**-resistant adhesins of, human erythrocyte **receptors** for)

IT Erythrocyte
(Escherichia coli **mannose**-resistant adhesin **receptors** of, of human, characterization of)

IT Agglutinins and Lectins
RL: BIOL (Biological study)
(adhesive factors, **mannose**-resistant, human erythrocyte **receptors** for, of Escherichia coli)

IT 57-88-5, biological studies 9001-67-6 **9026-00-0**
RL: BIOL (Biological study)
(Escherichia coli binding by erythrocyte of human stimulation by, adhesins in relation to)

L35 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2000:65106 HCAPLUS

DOCUMENT NUMBER: 132:217431

TITLE: Prostaglandin E1 influences serum **cholesterol esterase** and lipase activity in different ways

AUTHOR(S): Piorunska-Stolzmann, M.

CORPORATE SOURCE: Clinical Biochemistry, Department of General Chemistry, Karol Marcinkowski University of Medical Sciences, Poznan, Pol.

SOURCE: Int. J. Tissue React. (1999), 21(3), 79-83
CODEN: IJTEDP; ISSN: 0250-0868

PUBLISHER: Bioscience Ediprint Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The in vitro and in vivo effects of prostaglandin E1 on cholesterol ester hydrolase (CEase) and lipase [glycerol ester hydrolase (GEH)] activity in human serum were examd. Cholesterol esterase and lipase activity in the sera of men with atherosclerosis differed substantially from that in the control subjects. CEase activity was raised and GEH activity suppressed in the serum of men with atherosclerosis compared with controls. Prostaglandin E1 in vitro was found to suppress lipase but to increase cholesterol esterase activity to some extent. However, in vivo activities of GEH and CEase in the sera of men with chronic arterial occlusions of the lower limbs treated with prostaglandin E1 revealed that lipase activity was increased but that cholesterol esterase activity was unchanged. Recent studies have demonstrated that by altering the metabolic pathways of acylcholesterols and triacylglycerols, prostaglandin E1 may lead to the development of new strategies for retarding atherosclerosis.

REFERENCE COUNT: 15
REFERENCE(S):
(1) Aviram, M; J Biol Chem 1991, V266, P11567 HCAPLUS
(2) Brodt-Eppley, J; Biochim Biophys Acta 1995, V1272, P69 HCAPLUS
(4) Hajjar, D; Biochem Pharmacol 1985, V34, P295 HCAPLUS
(5) Hajjar, D; J Lipid Res 1983, V24, P1176 HCAPLUS
(6) Khoo, J; J Biol Chem 1981, V256, P12659 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:335143 HCAPLUS
DOCUMENT NUMBER: 131:128039
TITLE: Relationship of human pancreatic **cholesterol esterase** gene structure with lipid phenotypes
AUTHOR(S): Aleman-Gomez, Jose A.; Colwell, Niall S.; Vyas, Kamlesh; Boreck, Ingrid; Shonfeld, Gustav; Lange, Louis G.; Kumar, Vijaya B.
CORPORATE SOURCE: Department of Medicine, Washington University Medical Center, St. Louis, MO, USA
SOURCE: Life Sci. (1999), 64(25), 2419-2427
CODEN: LIFSAK; ISSN: 0024-3205
PUBLISHER: Elsevier Science Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Pancreatic cholesterol esterase is one of the enzymes that plays a pivotal role in cholesterol absorption. Differences in the genotype of this enzyme could affect the susceptibility of individuals to dyslipidemia and/or cardiovascular disease. We undertook this study to investigate if any correlation exists between restriction fragment length polymorphism in the human pancreatic cholesterol esterase gene and serum lipid levels. DNA from 96 healthy adults was restricted with Stu I, Southern blotted, and probed with cDNA of human pancreatic cholesterol esterase. Results revealed six distinct patterns which were classified as A, B, C, D, E, and F which had a population frequency of 1%, 34.5%, 49%, 12.5%, 1% and 2% resp. Correlation of the distribution of lipid and lipoprotein levels by pattern and sex revealed a significant interaction between pattern type and HDL ($p=0.03$) in the most common group (group C) for males. Male patients of pattern C tended to have a lower LDL cholesterol than non-pattern C males ($p=0.07$); in addn., 80% of all males in the study population with LDL cholesterol under 100 mg/dL were found in pattern C. Thus, the most common Stu I RFLP genotype is assocd. with a favorable lipid phenotype. This report shows an assocn. between the human pancreatic cholesterol esterase genotype and serum lipid levels. Further anal. of a larger study group with Stu I and alternative polymorphic restriction enzymes is warranted, to confirm this biol. plausible result.

REFERENCE COUNT: 32
REFERENCE(S):
(1) Bosner, M; Proc Natl Acad Sci USA 1988, V85, P7438

HCAPLUS
(2) Brodt-Eppley, J; Biochim Biophys Acta 1995, V1272, P69 HCAPLUS
(3) Brodt-Eppley, J; Journal of Lipid Research 1994, V35, P27 HCAPLUS
(5) Cooper, D; Human Genetics 1984, V66, P1 HCAPLUS
(7) Fontaine, R; Biochemistry 1991, V30, P7008 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:190911 HCAPLUS
DOCUMENT NUMBER: 130:336263
TITLE: Paradoxical effect on **atherosclerosis** of hormone-sensitive lipase overexpression in macrophages
AUTHOR(S): Escary, Jean-Louis; Choy, Henry A.; Reue, Karen; Wang, Xu-Ping; Castellani, Lawrence W.; Glass, Christopher K.; Lusis, Aldons J.; Schotz, Michael C.
CORPORATE SOURCE: Lipid Research Laboratory, West Los Angeles VA Medical Center, Los Angeles, CA, 90073, USA
SOURCE: J. Lipid Res. (1999), 40(3), 397-404
CODEN: JLPRAW; ISSN: 0022-2275
PUBLISHER: Lipid Research, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Foam cells formed from receptor-mediated uptake of lipoprotein cholesterol by macrophages in the arterial intima are crit. in the initiation, progression, and stability of atherosclerotic lesions. Macrophages accumulate cholesterol when conditions favor esterification by acyl-CoA:cholesterol acyltransferase (ACAT) over cholesteryl-ester hydrolysis by a neutral cholesteryl-ester hydrolase, such as hormone-sensitive lipase (HSL), and subsequent cholesterol efflux mediated by extracellular acceptors. The authors recently made stable transfectants of a murine macrophage cell line, RAW 264.7, that overexpressed a rat HSL cDNA and had a 5-fold higher rate of cholesteryl-ester hydrolysis than control cells. The current study examd. the effect of macrophage-specific HSL overexpression on susceptibility to diet-induced atherosclerosis in mice. A transgenic line overexpressing the rat HSL cDNA regulated with a macrophage-specific scavenger receptor promoter-enhancer was established by breeding with C57BL/6J mice. Transgenic peritoneal macrophages exhibited macrophage-specific 7-fold overexpression of HSL cholesterol esterase activity. Total plasma cholesterol levels in transgenic mice fed a chow diet were modestly elevated 16% compared to control littermates. After 14 wk on a high-fat, high-cholesterol diet, total cholesterol increased 3-fold, with no difference between transgenics and controls. However, HSL overexpression resulted in thicker aortic fatty lesions that were 2.5-times larger in transgenic mice. HSL expression in the aortic lesions was shown by immunocytochem. Atherosclerosis was more advanced in transgenic mice exhibiting raised lesions involving the aortic wall, along with lipid accumulation in coronary arteries occurring only in transgenics. Thus, increasing cholesteryl-ester hydrolysis, without concomitantly decreasing ACAT activity or increasing cholesterol efflux, is not sufficient to protect against atherosclerosis.

REFERENCE COUNT: 27
REFERENCE(S):

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(3) Bocan, T; Arterioscler Thromb 1991, V11, P1830 HCAPLUS
(4) Brown, M; J Biol Chem 1980, V255, P9344 HCAPLUS
(6) Cheng, D; J Biol Chem 1995, V270, P685 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:443934 HCAPLUS
DOCUMENT NUMBER: 125:109649
TITLE: Chromatographic separation and analysis of serum remnant-like lipoproteins
INVENTOR(S): Kitamura, Takashi; Kato, Yoshio; Okazaki, Myo; Sasamoto, Keiko
PATENT ASSIGNEE(S): Tosoh Corp, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08105876	A2	19960423	JP 1994-215768	19940909
			JP 1994-190511	19940812

PRIORITY APPLN. INFO.:
AB Serum remnant-like lipoproteins is sepd. by chromatog. column and the cholesterol content in the sepd. chylomicrons and VLDL is detd. by enzyme bioassay. The disclosed method allows automation of the anal. possible. TSKgel Lipopropak column was used for sepn. Enzyme, such as cholesterol esterase, cholesterol oxidase and/or peroxidase, and quinone dye, such as N-ethyl-N-(3-methylphenyl)-N'-succinylethylenediamine, N-ethyl-N-(3-sulfopropyl)-m-anisidine or 4-aminoantipyrine, are used for cholesterol detn.

L35 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:443933 HCAPLUS
DOCUMENT NUMBER: 125:81273
TITLE: Antibody-containing packing material for separating lipoproteins
INVENTOR(S): Kitamura, Takashi; Kato, Yoshio; Okazaki, Myo; Sasamoto, Keiko
PATENT ASSIGNEE(S): Tosoh Corp, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08105875	A2	19960423	JP 1994-215767	19940909
			JP 1994-190510	19940812

PRIORITY APPLN. INFO.:
AB Chromatog. column filled with packing material contg. immobilized monoclonal anti-human apoA-1 and anti-human apoB-100 antibodies that do not recognizing apo-B-48 is disclosed for sepg. remnant-like lipoproteins for cholesterol detn. Enzyme, such as cholesterol esterase, cholesterol oxidase and/or peroxidase, and quinone dye, such as N-ethyl-N-(3-methylphenyl)-N'-succinylethylenediamine, N-ethyl-N-(3-sulfopropyl)-m-anisidine or 4-aminoantipyrine, are used for cholesterol detn.

L35 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:58448 HCAPLUS
DOCUMENT NUMBER: 124:199374
TITLE: Impaired mobilisation of cholesterol from stored cholesteryl esters in human (THP-1) macrophages
AUTHOR(S): Graham, Annette; Angell, Anthony D. R.; Jepson, Catherine A.; Yeaman, Stephen J.; Hassall, David G.
CORPORATE SOURCE: Biology Division, Wellcome Research Laboratories,

SOURCE: Langley Court, Beckenham Kent, BR3 3BS, UK
Atherosclerosis (Shannon, Irel.) (1996), 120(1,2), 135-45
CODEN: ATHSBL; ISSN: 0021-9150

DOCUMENT TYPE: Journal
LANGUAGE: English

AB The formation of macrophage-derived foam cells is central to the development of fatty streaks within the arterial wall, and to the progression of atherosclerosis. The unregulated deposition of cholesteryl esters, as lipid droplets within the cytoplasm of these cells, is responsible for the formation of foam cells; this process is thought to be regulated by the balance between cholesterol esterification, by acyl CoA:cholesterol acyltransferase (ACAT), and hydrolysis, by neutral cholesteryl ester hydrolase (nCEH). This study examines the importance of the balance between these two enzymes in detg. the efflux of cholesterol from human (THP-1) macrophages. The presence of modified lipoprotein, or of 25-hydroxycholesterol, markedly increased cholesterol esterification in these cells and these effects were potently inhibited by the presence of the ACAT inhibitor, 447C88. In the absence of HDL, an acceptor particle, there was little or no hydrolysis of the cholesteryl ester pool and no efflux of cholesterol to the extracellular milieu; addn. of HDL led to a partial (36%) redn. in cholesteryl esters, an effect which was not enhanced by the inhibition of ACAT. This suggested that the stored cholesteryl esters in human (THP-1) macrophages, unlike those in mouse peritoneal macrophages, were relatively resistant to removal by efflux to HDL. Efflux of newly synthesized free cholesterol from these macrophages was increased by HDL in a saturable manner, suggesting that the lack of redn. of stored cholesteryl esters was due to impaired mobilisation of cholesteryl esters to free cholesterol via nCEH. Indeed, nCEH activity in these macrophages was much lower than in mouse peritoneal macrophages, and appeared to be down-regulated in the presence of 25-hydroxycholesterol or modified lipoproteins; this loss of nCEH activity was prevented by the ACAT inhibitor 447C88. The efflux of stored cholesteryl esters from THP-1 macrophages therefore appears to be limited by the activity of nCEH.

L35 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1994:190360 HCAPLUS
DOCUMENT NUMBER: 120:190360
TITLE: Protamine as an inhibitor for pancreatic lipase and **cholesterol esterase** and its use as food additive
INVENTOR(S): Okuda, Hiromichi
PATENT ASSIGNEE(S): Suisancho Chokan, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05339168	A2	19931221	JP 1992-147760	19920608

AB Pancreatic lipase and cholesterol esterase inhibitors, which delay absorption of dietary fats and cholesterols from the intestine, contain protamine as an active ingredient. The inhibitors prevent hyperlipidemia and arteriosclerosis. Herring protamine at .gtoreq.1 .mu.g/mL inhibited activity of pancreatic lipase on triolein.

L35 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1992:548339 HCAPLUS
DOCUMENT NUMBER: 117:148339
TITLE: Comparative studies on acid **cholesterol**

esterase in renal blood vessels and aorta of control and hypercholesterolemic rabbits

AUTHOR(S): Kamanna, Vaijinath S.; Vora, Sanjay; Roh, Daeyoung; Kirschenbaum, Michael A.

CORPORATE SOURCE: Dep. Med., Univ. California, Long Beach, CA, USA

SOURCE: Atherosclerosis (Shannon, Irel.) (1992), 94(1), 27-33
CODEN: ATHSBL; ISSN: 0021-9150

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Decreased acid cholesterol esterase has been linked to cholesteryl ester accumulation and development of atherosclerosis. The cholesterol esterase activity was compared with the accumulation of cholesterol and its esters in the aorta, renal artery, and renal preglomerular microvessels of rabbits fed a 2% cholesterol diet for 1 mo. The cholesterol esterase activity was increased in microvessels from cholesterol-fed animals compared to the activities in the aorta and renal artery. Cholesterol feeding increased the cholesterol and cholesteryl ester accumulation in all vascular tissues. The percent distribution of esterified/total cholesterol in renal microvessels was decreased, consistent with the concomitant increases in cholesterol esterase activities. The aorta and renal artery exhibited an increase in cholesterol and cholesteryl ester accumulation and an increase in the percent of esterified cholesterol, consistent with a decrease in acid cholesterol esterase after cholesterol feeding. Renal microvessels, compared to the aorta and renal artery, may be relatively protected from developing atherosclerotic microvascular lesions by an organ-specific increase in acid cholesterol esterase activity.

L35 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1991:59820 HCAPLUS

DOCUMENT NUMBER: 114:59820

TITLE: Activity of lysosomal hydrolases in various rabbit tissues in experimental **atherosclerosis**

AUTHOR(S): Tabagari, S. I.; Feofilaktova, S. N.; Varsanovich, E. A.; Vasil'ev, A. V.; Tutelyan, V. A.

CORPORATE SOURCE: Inst. Nutr., Moscow, USSR

SOURCE: Vopr. Med. Khim. (1990), 36(6), 32-4
CODEN: VMDKAM; ISSN: 0042-8809

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The activity of cathepsins D, B, C, H, L, acid lipase, acid cholesterol ester hydrolase, phospholipases A1, A2, and glucuronidase were studied in the liver, small intestinal mucosa, intimal aortic cells, blood platelets, and monocytes of rabbits after oral administration of cholesterol at daily doses of 300 mg/kg for 100 days. Distinct changes in the functional state of lysosomal systems were found in the liver, monocytes and aortic intima cells. Possible mechanisms of the obsd. enzymol. changes are discussed.

L35 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1988:404710 HCAPLUS

DOCUMENT NUMBER: 109:4710

TITLE: Lysosomal enzyme activity of monocytes/macrophages after incubation with postprandial hyperlipidemic serum and its role in atherogenesis

AUTHOR(S): Henze, K.; Wolfram, G.

CORPORATE SOURCE: Med. Poliklin., Univ. Muenchen, Munich, Fed. Rep. Ger.

SOURCE: Klin. Wochenschr. (1988), 66(4), 144-8
CODEN: KLWOAZ; ISSN: 0023-2173

DOCUMENT TYPE: Journal

LANGUAGE: German

AB Monocytes were obtained from the blood of healthy human volunteers and incubated for 24 h in RPMI 1640 medium + 30% homologous serum. Then the cells were incubated for an addnl. 24 h in either (1) homologous

hyperlipidemic serum obtained within 2 h of ingesting a fatty meal or (2) homologous normal serum obtained after an overnight fast of at least 12 h duration. Monocytes incubated in hyperlipidemic serum contained lower activities of lysosomal enzymes (cathepsin B, acid cholesteryl ester hydrolase, and N-acetyl-.beta.-glucosaminidase) than those incubated in normal, overnight serum. The relevance of this finding to the development of foam cells from macrophages in atherogenesis is discussed.

L35 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1986:440335 HCAPLUS
DOCUMENT NUMBER: 105:40335
TITLE: Herpesvirus infection prevents activation of cytoplasmic cholesteryl esterase in arterial smooth muscle cells
AUTHOR(S): Hajjar, David P.
CORPORATE SOURCE: Cornell Med. Cent., New York Hosp., New York, NY, 10021, USA
SOURCE: J. Biol. Chem. (1986), 261(17), 7611-14
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Herpesvirus infection has previously been shown to alter the cholesteryl ester cycle in avian arterial smooth muscle cells, resulting in cytoplasmic cholesteryl ester accumulation. This study attempted to define some of the regulatory mechanisms assocd. with the control of cytoplasmic cholesteryl esterase in Marek's disease herpesvirus (MDV)-infected cells. Cholesteryl esterase activity in MDV-infected cells could not be activated by 1) dibutyryl cAMP, 2) dibutyryl cAMP added together with protein kinase, or 3) agonists of adenylate cyclase. Activation of cytoplasmic cholesteryl esterase activity occurred in uninfected cells and in cells infected with a control virus, turkey herpesvirus. The rate of cholesterol efflux from arterial smooth muscle cells challenged with dibutyryl cAMP was unchanged in MDV-infected cells as compared to uninfected or turkey herpesvirus-infected cells in which efflux was increased. It is proposed that the reduced cytoplasmic cholesteryl esterase activity in lipid-laden, herpesvirus-infected cells is due partly to its inability to be activated by the cAMP-protein kinase mechanism. This may contribute to the pathol. changes seen in MDV-infected arterial cells, including accumulation of intracellular cholesteryl esters.

L35 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1986:66861 HCAPLUS
DOCUMENT NUMBER: 104:66861
TITLE: Virus-induced **atherosclerosis**. Herpesvirus infection alters aortic cholesterol metabolism and accumulation
AUTHOR(S): Hajjar, David P.; Fabricant, Catherine G.; Minick, C. Richard; Fabricant, Julius
CORPORATE SOURCE: Cornell Med. Cent., New York Hosp., New York, NY, 10021, USA
SOURCE: Am. J. Pathol. (1986), 122(1), 62-70
CODEN: AJPAA4; ISSN: 0002-9440
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effect of Marek's disease herpesvirus (MDV) infection on aortic cholesterol and cholesteryl ester (CE) metab. was studied. At 4 and 8 mo of age after MDV inoculation, MDV-infected animals had a significant 2-3-fold increase in total aortic lipid accumulation, characterized by significant increases in cholesterol, CE, triacylglycerol, and phospholipid, as compared with aortas from uninfected animals. At 8 mo of age, similar increases in aortic lipid accumulation were obsd. in MDV-infected animals as compared with those animals vaccinated with turkey

herpesvirus and later challenged with MDV. CE synthetic activity was increased significantly by 50% at 4 mo of age in the MDV-infected group as compared with the uninfected group, which could explain the initial increase in CE accumulation. By 8 mo of age, 2-fold increase in CE synthetic activity and a 30% and 80% redn. in lysosomal and cytoplasmic CE hydrolytic activities resp., were obsd. in aortas of MDV-infected chickens. Moreover, infection with MDV blocked the activation of cytoplasmic CE hydrolytic activity by dibutyryl cAMP or exogenous cAMP-dependent protein kinase. Apparently, lipid accretion in aortas of MDV-infected chickens results, in part, from alterations in cholesterol/CE metab. during early stages of the disease. Human atherosclerosis may result from specific herpesvirus infection which can alter lipid metab. and lead to lipid accretion.

L35 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1985:420666 HCAPLUS
DOCUMENT NUMBER: 103:20666
TITLE: Altered cholesteryl ester cycle is associated with lipid accumulation in herpesvirus-infected arterial smooth muscle cells
AUTHOR(S): Hajjar, David P.; Falcone, Domenick J.; Fabricant, Catherine G.; Fabricant, Julius
CORPORATE SOURCE: Med. Coll., Cornell Univ., New York, NY, 10021, USA
SOURCE: J. Biol. Chem. (1985), 260(10), 6124-8
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effects of Marek's disease herpesvirus (MDV) on cholesterol and cholesteryl ester metab. in cultured chicken arterial smooth muscle cells were studied. Infection of arterial smooth muscle cells from specific pathogen-free chickens with MDV, but not a virus control (herpesvirus of turkeys) led to a 7-10-fold increase in the accumulation of free and esterified cholesterol and a 2-fold increase in phospholipids. The cellular lipid changes obsd. in the MDV-infected arterial smooth muscle cells resulted, in part, from the following: decreased low-d. lipoprotein-cholesteryl ester hydrolysis due to decreased lysosomal (acid) cholesteryl ester hydrolytic activity; increased de novo synthesis of cholesterol; decreased excretion of free cholesterol; and both increased cholesteryl ester synthetic activity and decreased cytoplasmic (neutral) cholesteryl ester hydrolytic activity which resulted in increased incorporation of oleic acid into cholesteryl ester. Other changes noted in the MDV-infected cells as compared to uninfected cells included a 2-fold increase in both total protein synthesis and lysosomal and microsomal marker enzyme activities. These alterations in lipid and protein metab. in MDV-infected arterial smooth muscle cells may explain in part the in vivo findings that MDV infection of specific pathogen-free chickens fed a normocholesterolemic diet will induce arterial thickening and lipid accumulation resembling human atherosclerosis.

L35 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1972:486398 HCAPLUS
DOCUMENT NUMBER: 77:86398
TITLE: Aortic lipolytic enzymes in **atherosclerosis**
AUTHOR(S): Howard, A. N.; Patelski, J.; Bowyer, D. E.; Gresham, G. A.
CORPORATE SOURCE: Dep. Invest. Med., Univ. Camb., Cambridge, Engl.
SOURCE: Biochem. J. (1972), 128(1), 41P
CODEN: BIJOAK
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Atherosclerotic baboons, fed on a hypercholesterolemic diet, showed an 80% increase in aortic lipase activity but normal cholesteryl ester hydrolase activity. Compared with control animals, oleate and arachidonate were

increased and linoleate decreased in the cholesteryl esters; arachidonate was increased and linoleate decreased in phosphatidylcholine. After a course of i.v. injections of polyunsatd. phosphatidylcholine (Lipostabil), aortic lipase activity was normal, but cholesteryl ester hydrolase activity was increased by 50%. The elevated cholesterol plasma concn., the concn. of phospholipids, and the fatty acid compns. of cholesteryl esters and phosphatidylcholine were unchanged. Lipostabil decreased aortic lipid deposition by its effect on lipolytic enzymes.

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L1          225 S ESTERASE (2A) CHOLESTEROL? OR CHOLESTERASE# OR CHOLESTERIN ES
L2            2 S LYSOSOMAL ACID LIPASE# OR STEROL (W) (ESTER HYDROLASE# OR EST
L3          226 S L1 OR L2
L4         7093 S ATHEROSCLEROSIS? OR ANTIARTERIOSCLER?
L5         7168 S L4 OR ANTIATHEROSCLER?
L6         7744 S L5 OR ATHEROSCLER?
L7           26 S L3 AND L6
L8            2 S LIPID HYDROLYZING (3A) (PROTEIN# OR POLYPEPTIDE# OR ENZYME?)
L9          227 S L3 OR L8
L10          26 S L9 AND L6

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L10  ANSWER 1 OF 26  WPIDS COPYRIGHT 2001   DERWENT INFORMATION LTD
AN   2001-476267 [51]   WPIDS
DNC  C2001-142904
TI   Providing lipid hydrolyzing protein to
     deficient cells, used to reduce atherosclerotic plaques,
     comprises administering a vector comprising and expressing a DNA sequence
     encoding biologically active lipid hydrolyzing
     protein.
DC   B04 D16
IN   DU, H; GRABOWSKI, G A
PA   (CHIL-N) CHILDRENS HOSPITAL RES FOUND
CYC  93
PI   WO 2001056596 A1 20010809 (200151)* EN   61p
        RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
            NL OA PT SD SE SL SZ TR TZ UG ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
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DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

ADT WO 2001056596 A1 WO 2001-US3481 20010202
PRAI US 2001-180362 20010202; US 2000-180362 20000204
AB WO 200156596 A UPAB: 20010910
NOVELTY - Providing (M1) biologically active **lipid hydrolyzing protein** or **polypeptide** or their mixtures, to cells of a mammal deficient in biologically active **lipid hydrolyzing protein** or **polypeptide**, comprising administering into cells a vector comprising and expressing a DNA sequence encoding biologically active **lipid hydrolyzing protein** or **polypeptide**, and expressing the DNA sequence in the cells, is new.

ACTIVITY - **Antiarteriosclerotic.**

MECHANISM OF ACTION - The LAL degrades lipoprotein-associated lipids presented to the lysosome.

Every third day for 30 days, LAL was administered as an intravenous bolus via tail vein of lal-/- mice. The mice received a regular chow diet and LAL dosing was begun at 2 months of age. Doses of LAL were 1.48 U (21 micro g, 70 micro l) LAL in 1 x phosphate buffered saline (PBS) with 2 % human serum albumin (HSA) and 10 mM of dithiothreitol (DTT). Control groups received 1 x PBS with 2 % HSA and 10 mM of DTT.

Triglycerides from the liver, spleen, and small intestine were determined by chemical analyses: the triglyceride concentration in the treated group was 65 % reduced compared to the untreated group.

USE - M1 is used to reduce **atherosclerotic** plaques in the treatment of **atherosclerosis** (claimed), or to treat Wolman's Disease, or Cholesteryl Ester Storage Disease (claimed).

Dwg.0/4

L10 ANSWER 2 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1999-527033 [44] WPIDS
DNC C1999-154779
TI Preparation of 4-(6-(hexylcarbamoyloxy)hexylcarbamoyloxy)-piperidine-1-carboxylic acid 4-phenoxyphenyl ester comprises carbonylation and coupling reaction, then carbonylation/hexylamine reaction, dealkylation and phenoxycarbonylation.
DC B03
IN JIRKOVSKY, I
PA (AMHP) AMERICAN HOME PROD CORP
CYC 1
PI US 5952506 A 19990914 (199944)* 7p
ADT US 5952506 A Provisional US 1997-44805 19970424, US 1998-62515 19980417
PRAI US 1997-44805 19970424; US 1998-62515 19980417
AB US 5952506 A UPAB: 19991026
NOVELTY - Preparation of 4-(6-(hexylcarbamoyloxy)hexylcarbamoyloxy)-piperidine-1-carboxylic acid 4-phenoxyphenyl ester comprises reacting 1-benzyl- (or 1-methyl-) 4-hydroxypiperidine with carbonylating agent and 6-aminohexanol, followed by reaction with a carbonylating agent and hexylamine, followed by dealkylation and concomitant phenoxycarbonylation.

DETAILED DESCRIPTION - Preparation of 4-(6-(hexylcarbamoyloxy)hexylcarbamoyloxy)-piperidine-1-carboxylic acid 4-phenoxyphenyl ester (I) comprises:

(a) reacting 1-benzyl-4-hydroxypiperidine or 1-methyl-4-hydroxypiperidine in an aprotic solvent at 0-70 deg. C (optionally in the presence of a tertiary amine) with:

(i) a carbonylating coupling reagent selected from carbonyldiimidazole, disuccinimidyl carbonate, 2,2'-carbonyl-bis(3,5-dioxo-1,2,4-oxazolidine) or 3,3'-carbonyl bis(5-phenyl-1,3-1,3,4-oxadiazole-2(3H)thione) and;

(ii) 6-aminohexanol;

(b) reacting the resultant 4-((6-hydroxyhexyl)carbamoyloxy)piperidine

derivative in an aprotic solvent at 0-70 deg. C (optionally in the presence of a tertiary amine) with:

(i) a carbonylating coupling reagent as above; and

(ii) hexylamine; and

(c) dealkylation and concomitant N-(4-phenoxy)phenoxycarbonylation of the intermediate 4-(6-(hexylcarbamoyloxy)hexylcarbamoyloxy)piperidine derivative with 4-phenoxyphenyl chloroformate in an aprotic solvent at 15-110 deg. C to give (I).

ACTIVITY - Antilipemic; **antiarteriosclerotic.**

MECHANISM OF ACTION - **Sterol-Esterase**-Inhibitor; Sterol-O-Acyltransferase-Inhibitor; ACAT-Inhibitor.

USE - For the large-scale preparation of (I) (claimed). (I) is useful for reducing cholesterol absorption and in the treatment of hypercholesterolemia, hyperlipidemia and **atherosclerosis.**

ADVANTAGE - (I) inhibits **cholesterol ester hydrolase** and acylcoenzyme A cholesterol acyltransferase. The preparation is carried out without isolation of intermediates and without changing solvents. The preparation gives improved purity, higher yields, lower costs, technical convenience and is less labor and time intensive than the prior art route in EP0635501-A1.

Dwg.0/0

L10 ANSWER 3 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1999-222370 [19] WPIDS
DNC C1999-065023
TI Manufacture of **cholesterol esterase** for estimation of esterified cholesterol in blood - by culturing microorganism belonging to Xanthomonas genus and having **cholesterol esterase** synthesizing ability followed by extraction of enzyme from culture.
DC B04 D16
PA (KIKK) KIKKOMAN CORP
CYC 1
PI JP 11056355 A 19990302 (199919)* 14p
ADT JP 11056355 A JP 1997-239163 19970821
PRAI JP 1997-239163 19970821
AB JP 11056355 A UPAB: 19990518

NOVELTY - Microorganism belonging to Xanthomonas genus which has **cholesterol esterase** synthesizing ability is grown in a culture medium. The enzyme produced is extracted from the culture medium.

USE - As a reagent for estimation of esterified cholesterol in blood used for diagnosis of **atherosclerosis**, myocardial infarction etc.

ADVANTAGE - The enzyme has high thermal stability and is obtained easily.

Dwg.0/4

L10 ANSWER 4 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1998-609956 [51] WPIDS
DNC C1998-182788
TI 4-Carbamoyloxy-piperidine-1-carboxylate ester derivative preparation - in 3 stages from 4-hydroxy-piperidine derivative via new intermediates, used as cholesterol absorption inhibitor.
DC B03 B05
IN JIRKOVSKY, I
PA (AMHP) AMERICAN HOME PROD CORP
CYC 79
PI WO 9847870 A1 19981029 (199851)* EN 14p
RW: AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW

AU 9869469 A 19981113 (199913) 16p
ZA 9803399 A 19991229 (200006)
ADT WO 9847870 A1 WO 1998-US6513 19980331; AU 9869469 A AU 1998-69469 19980331; ZA 9803399 A ZA 1998-3399 19980422
FDT AU 9869469 A Based on WO 9847870
PRAI US 1997-845565 19970424
AB WO 9847870 A UPAB: 19981223
Preparation of 4-[(6-hexylcarbamoyloxy)- hexylcarbamoyl]piperidine-1-carboxylic acid 4-phenoxyphenyl ester (I) comprises: (a) reacting 1-(benzyl or methyl)-4-hydroxypiperidine (II) with a carbonylating coupling reagent and 6-aminohexanol (III) in an aprotic solvent at 0-70 deg. C, optionally in the presence of a tertiary amine; (b) reacting the resultant 1-(benzyl or methyl)-4-[(6-hydroxyhexyl)carbamoyloxy]-piperidine (IV) with hexylamine (V) under the conditions of step (1); and (c) dealkylation and concomitant N-(4-phenoxy)-phenoxycarbonylation of the intermediate 1-(benzyl or methyl)-4-[6-(hexylcarbamoyloxy)-hexylcarbamoyloxy]piperidine (VI) with 4-phenoxyphenyl chloroformate (VII) in an aprotic solvent 15-110 deg. C. Also claimed are novel intermediates (IV), (VI) and (VII). Step (c) is also claimed as a separate process.

USE - (I), described in EP 635501, inhibits both **cholesterol ester hydrolase** and acyl-coenzyme A cholesterol acyltransferase, resulting in a reduction of cholesterol absorption. Possible uses include treatment of hypercholesterolaemia, hyperlipidaemia and **atherosclerosis**.

ADVANTAGE - This method utilises a single solvent throughout, requires no purification of intermediates and is suitable for large-scale production. The yield and purity of (I) are higher than in the normal laboratory-scale synthesis and the method is much less labour intensive.

Dwg.0/0

L10 ANSWER 5 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1998-467731 [40] WPIDS
DNN N1998-364435 DNC C1998-141911
TI Determination of skin cholesterol levels - by enzymatic reaction in vessel sealed to skin surface.
DC B04 D16 S03
IN LOPUKHIN, J M; PARFENOV, A S; LOPUKHIN YU, M
PA (PARF-I) PARFENOV A S; (IMII-N) IMI INT MEDICAL INNOVATIONS INC; (LOPU-I) LOPUKHIN YU M; (LOPU-I) LOPUKHIN J M
CYC 82
PI WO 9837424 A1 19980827 (199840)* RU 16p
RW: AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9857846 A 19980909 (199905)
EP 987553 A1 20000322 (200019) EN
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
BR 9807594 A 20000222 (200024)
RU 2130189 C1 19990510 (200026)
ADT WO 9837424 A1 WO 1998-RU10 19980126; AU 9857846 A AU 1998-57846 19980126; EP 987553 A1 EP 1998-901608 19980126, WO 1998-RU10 19980126; BR 9807594 A BR 1998-7594 19980126, WO 1998-RU10 19980126; RU 2130189 C1 RU 1997-102570 19970220
FDT AU 9857846 A Based on WO 9837424; EP 987553 A1 Based on WO 9837424; BR 9807594 A Based on WO 9837424
PRAI RU 1997-102570 19970220
AB WO 9837424 A UPAB: 19981008
Determination of skin cholesterol levels comprises sealing an open-bottomed vessel by its base to the skin surface; adding a buffer solution (pH 6.8) containing 2.0-2.5 U cholesterol oxidase, 0.04-0.06 wt.%

sodium deoxycholate and 0.1-0.2 wt.% 3-(dodecyldimethyl ammonium)-propane sulphonate; determining the cholesterol concentration in the reaction mixture by measuring the hydrogen peroxide concentration, and calculating the cholesterol content of the skin from the determined cholesterol concentration.

The reaction mixture also contains 3-5 U **cholesterol esterase**. The hydrogen peroxide concentration is measured: (a) by spectrophotometry after adding a peroxidase and a [chromogenic] substrate; (b) by immersing an electrochemical sensor in the reaction mixture, or (c) by immersing a colorimetric indicator (strip) in the reaction mixture.

USE - The method is used for early diagnosis of **atherosclerosis** and for monitoring **atherosclerosis** therapy.

ADVANTAGE - The method is more specific, simpler, more broadly applicable and more accurate than prior art methods (cf. US 5489510).

Dwg.3/3

L10 ANSWER 6 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1998-078841 [08] WPIDS
DNN N1998-063081 DNC C1998-026383
TI Determination of low density lipoprotein cholesterol - using sugar conjugates of **cholesterol esterase** and **cholesterol** oxidase.
DC B04 D16 S03
IN FUTATSUGI, M; TANAKA, I
PA (WAKP) WAKO PURE CHEM IND LTD; (WAKP) WAKO JUNYAKU KOGYO KK
CYC 27
PI EP 819765 A2 19980121 (199808)* EN 15p
R: AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC NL PT RO SE SI
JP 10080300 A 19980331 (199823) 12p
CA 2210783 A 19980118 (199827)
KR 98010429 A 19980430 (199915)
US 5879901 A 19990309 (199917)
ADT EP 819765 A2 EP 1997-112007 19970715; JP 10080300 A JP 1997-210099 19970718; CA 2210783 A CA 1997-2210783 19970717; KR 98010429 A KR 1997-32313 19970711; US 5879901 A US 1997-895879 19970717
PRAI JP 1996-207770 19960718
AB EP 819765 A UPAB: 19980223
Method for measuring the amount of low-density lipoprotein (LDL) cholesterol in a sample comprises:

(a) mixing the sample with a first reagent solution containing a buffer;

(b) measuring the optical density (OD1) of the mixture;

(c) adding a second reagent solution containing **cholesterol esterase** and **cholesterol** oxidase;

(d) measuring the optical density (OD2) of the mixture;

(e) subtracting a value obtained by multiplying OD1 with a correction factor from OD2 to obtain a value OD3, and

(f) comparing OD3 with a calibration curve.

The first and/or second reagent solutions contain a coupler, a developer and a peroxidase. The **cholesterol esterase** and/or **cholesterol** oxidase is in the form of a conjugate with a sugar compound.

Also claimed are the reagents used in the method above.

USE - The process is used for the diagnosis of **atherosclerosis** and disorders of lipid metabolism.

ADVANTAGE - The conjugated enzymes react specifically with LDL cholesterol and not with high density lipoprotein (HDL) cholesterol.

Dwg.0/4

L10 ANSWER 7 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1995-274903 [36] WPIDS

DNC C1995-124690
TI New heterocyclic oxime-carbamate derivs. - used as **cholesterol ester hydrolase** inhibitors for reducing blood cholesterol level, e.g. for treating **atherosclerosis**.
DC B05
IN FELMAN, S W; JIRKOVSKY, I; MEMOLI, K A
PA (AMHP) AMERICAN HOME PROD CORP
CYC 1
PI US 5438056 A 19950801 (199536)* 15p
ADT US 5438056 A US 1993-131820 19931005
PRAI US 1993-131820 19931005
AB US 5438056 A UPAB: 19950918
Heterocyclic oxime carbamates of formula (I) are new: R1, R2 = thienyl, naphthyl, phenyl (opt. substd. by halogen, OMe or di-(1-3C alkyl)-amino) or substd. furanonyl of formula (a): or CR1R2 = 5H-indeno (1,2-b)pyridin-5-ylidene, 9H-xanthen-9-ylidene or 10,10-dioxo-9H-thiaxanthen-9-ylidene; R3, R4 = H or 4-20C hydrocarbyl; or NR3R4 = 4-(R8)-piperidino; R5, R6 = 1-3C alkyl, 5-7C cycloalkyl or phenyl (opt. substd. by 1-5C alkyl or halogen); R7 = H or halogen; R8 = 1-3C alkyl.
USE - (I) inhibit **cholesterol ester hydrolase**, and are useful for lowering, blood cholesterol (claimed), and may be useful for treating e.g. **atherosclerosis**, familial hypercholesterolaemia and hyperlipaemia.
Dwg.0/0

L10 ANSWER 8 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1995-138961 [18] WPIDS
DNC C1995-064231
TI New di benzo-furanyl-alkyl-carbamate derivs. - are **cholesterol ester hydrolase** inhibitors for treating **atherosclerosis** etc..
DC B02
IN COMMONS, T J; MEWSHAW, R E; STRIKE, D P
PA (AMHP) AMERICAN HOME PROD CORP
CYC 1
PI US 5401769 A 19950328 (199518)* 5p
ADT US 5401769 A US 1994-190402 19940202
PRAI US 1994-190402 19940202
AB US 5401769 A UPAB: 19950518
Dibenzofuranyl-N-alkyl carbamate derivs. of formula (I) are new: R1, R2 = H, F, Cl, Br, I, CF3, CN, NO2, 1-6C alkyl, 1-6C alkoxy, CO2H, 2-7C alkylcarbonyl, 2-7C alkylcarbonyloxy, 2-7C alkoxycarbonyl, 2-7C alkoxycarbonyloxy, mono- or di(1-6C alkyl)aminocarbonyl or mono- or di(1-6C alkyl)aminocarbonyloxy; R3 = H or 1-6C alkyl; R4 = 2-18C alkyl, 3-8C cycloalkyl, 1-6C alkyl or 7-18C phenylalkyl (opt. ring substd. by 1-6C alkyl, 1-6C alkoxy, halo, NO2, CN, CF3 or phenyl).
USE - (I) inhibit the absorption of cholesterol from the intestinal tract by inhibiting **cholesterol ester hydrolase** (CEH). They are therefore used to treat **atherosclerosis**, familial hypercholesterolaemia, and hyperlipidaemia.
Dwg.0/0

L10 ANSWER 9 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1995-053622 [08] WPIDS
DNC C1995-024413
TI New tris carbamic acid ester(s) are ACAT inhibitors - useful for treating e.g. **atherosclerosis**, familial hypercholesterolaemia and hyperlipaemia.
DC B03
IN COMMONS, T J; LACLAIR, C M; STRIKE, D P; COMMONS, T J W
PA (AMHP) AMERICAN HOME PROD CORP
CYC 29

PI EP 635501 A1 19950125 (199508)* EN 35p
R: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE
AU 9467520 A 19950202 (199513)
CA 2128116 A 19950122 (199516)
FI 9403441 A 19950122 (199516)
BR 9402852 A 19950404 (199520)
JP 07089934 A 19950404 (199522) 27p
NZ 264032 A 19951221 (199606)
ZA 9405214 A 19960327 (199619) 55p
HU 70942 T 19951128 (199733)
BR 1100752 A3 19980505 (199825)
SG 47596 A1 19980417 (199826)
IL 110302 A 19980615 (199836)
AU 692157 B 19980604 (199839)
HU 216790 B 19990830 (199940)
US 5952354 A 19990914 (199944)
RU 2130928 C1 19990527 (200027)
TW 369527 A 19990911 (200035)#

ADT EP 635501 A1 EP 1994-305305 19940719; AU 9467520 A AU 1994-67520 19940718; CA 2128116 A CA 1994-2128116 19940715; FI 9403441 A FI 1994-3441 19940720; BR 9402852 A BR 1994-2852 19940718; JP 07089934 A JP 1994-165075 19940718; NZ 264032 A NZ 1994-264032 19940718; ZA 9405214 A ZA 1994-5214 19940715; HU 70942 T HU 1994-2108 19940715; BR 1100752 A3 BR 1997-1100752 19970512; SG 47596 A1 SG 1996-3025 19940719; IL 110302 A IL 1994-110302 19940713; AU 692157 B AU 1994-67520 19940718; HU 216790 B HU 1994-2108 19940715; US 5952354 A US 1993-95140 19930721; RU 2130928 C1 RU 1994-26296 19940715; TW 369527 A TW 1994-100154 19940110

FDT AU 692157 B Previous Publ. AU 9467520; HU 216790 B Previous Publ. HU 70942

PRAI US 1993-95140 19930721; TW 1994-100154 19940110

AB EP 635501 A UPAB: 19950602

Tris carbamic acid esters of 4 - 8 membered azacycloalkanols of formula (I) and their salts are new; p = 0 - 4, Z = -Ar1, -Ar1-Ar2-, -Ar1-O-Ar2, -Ar1-S-Ar2, -Ar1-O-C(O)-Ar2, -Ar1-C(O)-O-Ar2, -Ar1-C(O)-Ar2, -Ar1-(CH2)1-20-Ar2, -Ar1-(CH2)1-20-O-Ar2, -Ar1-O-(CH2)1-20-Ar2, -Ar1-(CR6=CR6)1-3-Ar2, -(CR6=CR6)1-3-Ar2 or -Ar1-NR7-Ar2; R6 = H or 1-8C alkyl; R7 = H, 1-8C alkyl, 1-8C alkylcarbonyl or 1-8C alkoxycarbonyl; Ar1, Ar2 = Ph, naphthyl, furanyl, benzofuranyl, pyrazinyl, thienyl, benzothienyl, imidazolyl, benzoxazolyl, thiazolyl, benzthiazolyl, indenyl, indolyl, quinolinyl, benzotriazolyl, carbazolyl, benzimidazolyl or fluorenyl etc. (all opt. substd.); A = a bridging gp. selected from 1-20C hydrocarbyl opt. unsatd. with 1-6 sites of olefinic and/or acetylenic unsaturation, -(CH2)m-W-(CH2)n- or -(CH2)b-Y-(CH2)c-; m, n = 1 - 19; m + n = 2 - 20; W = -O-, -S- or NR14; R14 = H, 1-20C alkyl, 1-20C alkylcarbonyl, 1-20C alkoxycarbonyl or benzyl; b, c = 0 - 20; b + c = 1 - 20, Y = phenylene, pyridinylene, naphthylene, pyrrolylene or a gp. of formula (ii) - (v) etc.; R15 = H, 1-8C alkyl, 1-20C alkylcarbonyl, 1-20C alkoxycarbonyl or benzyl; R1, R2 = H, 1-8C alkyl, 1-8C alkoxy, 1-8C alkylcarbonyl, OH, CN, 1-8C alkylcarbonyloxy or -(CH2)0-6-NR18R19; R18 = 1-8C alkyl, 1-8C alkoxycarbonyl or 1-8C alkylcarbonyl; R19 = H or 1-8C alkyl; R3 = H, 1-8C alkyl or 7-15C arylalkyl; aryl = Ph opt. substd. by 1-6C alkyl; R4, R5 = H, 1-20C alkyl, 2-20C alkenyl, 3-10C cycloalkyl, -(CH2)1-20-(3-10C cycloalkyl), -(CH2)1-20-Ar1 or -(CH2)1-20NR20R21; R20 = 1-20C alkyl, 2-20C alkenyl, 1-20C alkylcarbonyl, 1-20C alkoxycarbonyl or benzyl; R21 = H or 1-20C alkyl;

USE - (I) inhibit absorption of cholesterol from the intestinal tract and inhibit enzymes **cholesterol ester hydrolase** (CEH) and acyl-CoA cholesterol acyltransferase (ACAT). (I) are useful for treating **atherosclerosis**, familial hypercholesterolaemia and hyperlipidaemia.

Dwg.0/0

L10 ANSWER 10 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1995-030330 [04] WPIDS

DNC C1995-013640
TI New dibenzofuran yl esters of N-heterocyclic carboxylic acids - useful for reducing cholesterol uptake from intestinal tract.
DC B02
IN COMMONS, T J; STRIKE, D P
PA (AMHP) AMERICAN HOME PROD CORP
CYC 1
PI US 5373009 A 19941213 (199504)* 4p
ADT US 5373009 A US 1994-190416 19940202
PRAI US 1994-190416 19940202
AB US 5373009 A UPAB: 19950201
Dibenzofuran derivs. of formula (I) are new: R1, R2 = halogen, CF3, CN, NO2, 1-6C alkyl, 1-6C alkoxy, COOH, 2-7C alkanoyl, 2-7C alkanoyloxy, 2-7C alkoxycarbonyl, mono- or di(1-6C alkyl)aminocarbonyl or mono- or di(1-6C alkyl)aminocarbonyloxy; m,n and p = 0-2; R3 = 1-6C alkyl; X = O, S or CR4R5; R4, R5 = H or 1-6C alkyl, or CR4R5 = 3-8C carbocyclic ring. Also claimed is a method of reducing cholesterol uptake from the intestinal tract by admin. of (I).
USE - (I) are **cholesterol ester hydrolase** (CEH) inhibitors for reducing cholesterol uptake from the intestinal tract. They may be used to treat e.g. **atherosclerosis**, familial hypercholesterolaemia, hyperlipaemia. (I) may be administered orally or parenterally
Dwg.0/0

L10 ANSWER 11 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1994-191540 [23] WPIDS
CR 1992-415936 [50]
DNN N1994-150710 DNC C1994-087622
TI Assay or isolation of lipoprotein (a) - using a lectin attached to a solid support to specifically bind lipoprotein (a) in a liq. sample.
DC B04 D16 S03
IN SEMAN, L J
PA (SEMA-I) SEMAN L J
CYC 1
PI US 5320968 A 19940614 (199423)* 7p
ADT US 5320968 A CIP of US 1991-704457 19910523, US 1993-21189 19930223
PRAI US 1991-704457 19910523; US 1993-21189 19930223
AB US 5320968 A UPAB: 19940727
Assaying for lipoprotein (a) in a liq. sample contg. one or more other serum lipoproteins and having a pH of 6.9-7.5, comprises (a) contacting the liq. sample with a solid support reagent contg. lectin attached to a solid support to bind lipoprotein (a) to the support-bound lectin, (b) removing lipoproteins in the sample which are not bound to the support and (c) assaying the lipoprotein (a) remaining.
The lectin may be e.g. wheat germ agglutinin (WGA), lima bean agglutinins, phytohaemagglutinin or horseshoe crab lectins. The assay for cholesterol may comprise treating the lipoprotein (a) with **cholesterol esterase** and a surfactant to release cholesterol and reacting the released cholesterol with cholesterol oxidase to produce H2O2 and assaying for H2O2 using a peroxidase enzyme.
USE/ADVANTAGE - The assays can be used for detecting elevated lipoprotein (a) levels in subjects with coronary artery disease or **atherosclerosis**. The purified lipoprotein (a) can be used for the prodn. of antibodies. The lectin binds specifically to lipoprotein (a) and allows specific assay and isolation. The methods can provide a direct lipoprotein (a) determn. and have a margin of error of +/- 1%.
Dwg.0/3

L10 ANSWER 12 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1993-214331 [26] WPIDS
CR 1995-178125 [23]
DNN N1993-164702 DNC C1993-095146

TI Rapid, direct determn. of low density lipoprotein - by pptn. in presence of nucleating agent, removal of other lipoprotein(s), redissolution of ppte. and assay.
DC A89 B04 S03
IN ERTINGSHAUSEN, G; LAW, W T; LAW, W; ERTINGHAUSEN, G
PA (ACTI-N) ACTIMED LAB INC
CYC 22
PI WO 9312429 A1 19930624 (199326)* EN 25p
AU 9332796 A 19930719 (199344)
US 5286626 A 19940215 (199407) 5p
NO 9402197 A 19940610 (199430)
FI 9402763 A 19940610 (199431)
EP 619885 A1 19941019 (199440) EN
JP 07501945 W 19950302 (199517)
AU 661097 B 19950713 (199535)
EP 619885 B1 19961002 (199644) EN 12p
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
DE 69214297 E 19961107 (199650)
ADT WO 9312429 A1 WO 1992-US10809 19921211; AU 9332796 A AU 1993-32796 19921211; US 5286626 A US 1991-806183 19911213; NO 9402197 A WO 1992-US10809 19921211, NO 1994-2197 19940610; FI 9402763 A WO 1992-US10809 19921211, FI 1994-2763 19940610; EP 619885 A1 WO 1992-US10809 19921211, EP 1993-901285 19921211; JP 07501945 W WO 1992-US10809 19921211, JP 1993-511132 19921211; AU 661097 B AU 1993-32796 19921211; EP 619885 B1 WO 1992-US10809 19921211, EP 1993-901285 19921211; DE 69214297 E DE 1992-614297 19921211, WO 1992-US10809 19921211, EP 1993-901285 19921211
FDT AU 9332796 A Based on WO 9312429; EP 619885 A1 Based on WO 9312429; JP 07501945 W Based on WO 9312429; AU 661097 B Previous Publ. AU 9332796, Based on WO 9312429; EP 619885 B1 Based on WO 9312429; DE 69214297 E Based on EP 619885, Based on WO 9312429
PRAI US 1991-806183 19911213
AB WO 9312429 A UPAB: 19950626
Direct detrmn. of low density lipoprotein (LDL) in a fluid comprises (1) adding a polyanionic cpd. (I), divalent metal salt (II) and nucleating agent (III) to the sample to form clusters of LDL; (2) adding enzymes to destroy high and very low density lipoproteins selectively; (3) redissolving the LDL and (4) determining its concn. conventionally.

Pref., (I) is dextran sulphate; heparin; phosphotungstic acid or poly(vinyl sulphate). (II) is a Ca, Mn or Mg salt and (III) is porous Fe oxide (opt. having (I) coated on it).

LDL is detected enzymatically after redissolution in EDTA-NaCl (esp. a soln. of 2.5-6% NaCl and 0.05-0.1% EDTA); protease (75-100 units per test) or MgCl2 (50-200mM). Redissolved LDL is pref. reacted with cholesterol oxidase (CO) and CE, and the H2O2 formed determined colorimetrically.

USE/ADVANTAGE - Provides a simple, sensitive and reliable determn. of LDL, usually within 2 min., (III) ensures rapid pptn. of LDL in a form which is stable against surfactants and **cholesterol esterase** (CE).
Dwg.1/2
Dwg.1/2
Dwg.1/2

L10 ANSWER 13 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1992-432990 [52] WPIDS
DNC C1992-192232
TI New 1-piperidine carboxylic acid 4-phenoxyphenyl ester derivs. - are CEH and ACAT inhibitors for treating hypercholesterolaemia, hyperlipaemia, coronary heart disease and **atherosclerosis**.
DC B03
IN COMMONS, T J; STRIKE, D P
PA (AMHP) AMERICAN HOME PROD CORP
CYC 39

PI US 5169844 A 19921208 (199252)* 10p
WO 9313067 A1 19930708 (199328) EN 28p
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE
W: AU BB BG BR CA CS FI HU JP KP KR LK MG MN MW NO NZ PL RO RU SD
AU 9334251 A 19930728 (199347)
ADT US 5169844 A US 1991-812512 19911220; WO 9313067 A1 WO 1992-US11287 19921210; AU 9334251 A AU 1993-34251 19921210
FDT AU 9334251 A Based on WO 9313067
PRAI US 1991-812512 19911220
AB US 5169844 A UPAB: 19931118
Phenoxyphenyl 1-piperidinecarboxylate derivs. of formula (I) are new. In (I) R1 = H, 1-20C alkyl, 3-20C alkenyl, 3-8C cycloalkyl, 3-8C cycloalkyl-(1-6C)alkyl, phenyl (opt. substd. by 1-6C alkyl, 1-6C alkoxy, halo, NO2, CN or CF3) or phenyl-(1-20C) alkyl (opt. ring substd. by 1-6C alkyl, 1-6C alkoxy, halo, NO2, CN, CF3 or Ph); R2 = H or 1-6C alkyl; or NR1R2 forms a gp. of formula (a): n = 0-2; X = O, S or CR7R8; R7 = H, OH, 1-6C alkyl, 2-6C alkanoyloxy, 1-6C hydroxyalkyl, COOH, 1-16C alkoxycarbonyl(sic) or phenyl (opt. substd. by 1-6C alkyl, 1-6C haloalkyl, 1-6C perhaloalkyl, halo, NO2 or CN); R8 = H or 1-6C alkyl; or R7+R8 completes a 3-7C polymethylene ring; R9 = H, 1-6C alkyl or 2-12C gem dialkyl; R3-R6 = H, 1-6C alkyl, 1-6C alkoxy, halo, NO2, CN, 1-6C perhaloalkyl, 1-16C alkoxycarbonyl(sic) or COOH.
USE - (I) inhibit cholesterol ester hydrolose (CEH) and/or acyl coenzyme A:cholesterol acyltransferase (ACAT) and so inhibit the formation of cholesteryl esters. Thus (I) interfere with, and prevent, assimilation of cholesterol into the lymphotic system and thus the bloodstream. (I) can be used to treat high serum cholesterol levels and associated diseases (e.g, coronery heart disease, **atherosclerosis**, familiar hypercholesterolaemia and hyperlipaemia).
0/0
Dwg.0/0

L10 ANSWER 14 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1992-415936 [50] WPIDS
CR 1994-191540 [23]
DNN N1992-317142 DNC C1992-184626
TI Assay for lipoprotein (A) in the presence of other lipoprotein(s) - comprises using lectin attached to a solid support to selectively bind the lipoprotein(A).
DC B04 S03
IN SEMAN, L J
PA (SEMA-I) SEMAN L J
CYC 17
PI WO 9221015 A1 19921126 (199250)* EN 23p
RW: AT BE CH DE DK ES FR GB GR IT LU MC NL SE
W: JP NO
EP 585387 A1 19940309 (199410) EN
R: AT BE CH DE DK ES FR GB GR IT LI LU MC NL SE
EP 585387 A4 19950118 (199545)
EP 585387 B1 19990811 (199936) EN
R: AT BE CH DE DK ES FR GB GR IT LI LU MC NL SE
DE 69229784 E 19990916 (199944)
ADT WO 9221015 A1 WO 1992-US4302 19920521; EP 585387 A1 EP 1992-913182 19920521, WO 1992-US4302 19920521; EP 585387 A4 EP 1992-913182 ; EP 585387 B1 EP 1992-913182 19920521, WO 1992-US4302 19920521; DE 69229784 E DE 1992-629784 19920521, EP 1992-913182 19920521, WO 1992-US4302 19920521
FDT EP 585387 A1 Based on WO 9221015; EP 585387 B1 Based on WO 9221015; DE 69229784 E Based on EP 585387, Based on WO 9221015
PRAI US 1991-704457 19910523
AB WO 9221015 A UPAB: 19991026
A method is claimed for assaying lipoprotein (a) (LPa) in a liq. sample contg. one or more other serum LPs, comprising (a) contacting the liquid

sample with a solid-support reagent contg. lectin attached to a solid support under conditions effective to bind LPa to the support bound lectin, (b) removing LPs in the sample which are not bound to the support and (c) assaying the LPa remaining after the removal.

Pref. the lictin binds specifically to LPa monosaccharide units selected from N-acetyl-D-glucosamine and N-acetylneuroaminic acid. The lectin may be e.g. wheat germ agglutinin, lima bean agglutinins, phytohaemagglutinin or horseshoe crab lectins. The assaying may include (i) treating the LPa with **cholesterol esterase** and a surfactant to release cholesterol from the LPa, (ii) reacting the released cholesterol with cholesterol oxidase to produce H2O2 and (iii) assaying for produced H2O2 using a peroxidase enzyme.

USE/ADVANTAGE - The assay method provides a direct LPa cholesterol determn. with a margin of error of + or - 1% for use in screening for coronary artery disease and advanced **atherosclerosis**.

3/3

Dwg.3/3

Dwg.3/3

L10 ANSWER 15 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1992-133595 [17] WPIDS

DNC C1992-062469

TI New tri cyclic heterocyclic derivs. are ACAT inhibitors - used for treating hypercholesterolaemia, **atherosclerosis**, myocardial infarction etc..

DC B02

IN IKEDA, H; MEGURO, K; TAWADA, H

PA (TAKE) TAKEDA CHEM IND LTD

CYC 17

PI EP 481243 A 19920422 (199217)* EN 34p
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
CA 2052287 A 19920328 (199223)
JP 05009179 A 19930119 (199311) 21p
US 5264454 A 19931123 (199348) 19p
US 5418239 A 19950523 (199526) 18p

ADT EP 481243 A EP 1991-116099 19910921; CA 2052287 A CA 1991-2052287 19910926; JP 05009179 A JP 1991-202003 19910812; US 5264454 A US 1991-765182 19910925; US 5418239 A Div ex US 1991-765182 19910925, US 1993-117950 19930908

FDT US 5418239 A Div ex US 5264454

PRAI JP 1990-259657 19900927; JP 1991-202003 19910812

AB EP 481243 A UPAB: 19931006

Fused heterocycle derivs. of formula (I) and their salts are new. Ring A and ring B= opt. substd. benzene; X= N(O)m= C(R2), N(R3)-CO or O-CO; R2= H, alkyl or alkoxy; m= 0-1; R3= H or alkyl; Y= bond, NH, 1-2C alkylene or vinylene; R1= opt. substd. hydrocarbyl; n= 3-6. Ring A and ring B= benzene opt. substd. by 1-4 of halo, 1-6C alkyl (opt. substd. by halo), 1-6C alkoxy (opt. substd. by halo), 1-6C alkylthio (opt. substd. by halo), 1-3C acyloxy, di(1-6C alkyl); amino or OH (esp. A=benzene substd. by 1-3 of halo, 1-6C alkyl or OH and B= benzene). X= N= CR2, NR3CO, or OCO, R2= H or 1-6C alkoxy; R3= 1-6C alkyl; Y= NH or 1-2C alkylene; R1= 1-8C alkyl, 3-7C cycloalkyl, 3-7C cycloalkyl-(1-4C) alkyl, 6-10C aryl or 7-16C aralkyl all opt. substd. by 1-5 of halo, 1-6C alkyl (opt. substd. by halo), 1-6C alkoxy, (opt. substd. by halo), 1-6C alkylthio (opt. substd. by halo), 1-3C acyloxy, di(1-6C alkyl) amino or OH (esp. phenyl substd. by 1-3 of halo, 1-6C alkyl, 1-6C alkoxy, 1-6C acyloxy (sic), di(1-6C alkyl)amino or H (partic. 2,4-difluorophenyl)). n=3.

USE - (I) are acyl-CoA:cholesterol acyl transferase (ACAT) inhibitors ACAT inhibitors inhibit the absorption of dietary cholesterol from the intestinal tract, suppress the increase in cholesterol levels in the blood and suppress the accumulator of intracellular cholesterol. (I) are useful for treating hypercholesterolaemia and **atherosclerosis** and diseases associated with them e.g. ischaemic heart disease such as

myocardial infarction and cerebrovascular disorders such as cerebral infarction and cerebral apoplexy). (0/0)
0/0

L10 ANSWER 16 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1991-361500 [49] WPIDS
DNC C1991-155829
TI Decreasing absorption of fats and cholesterol through intestinal wall - comprises admin. of carbamate ester which acts as pancreatic **cholesterol esterase** inhibitor.
DC B05
IN QUINN, D M
PA (UNIP) UNIV IOWA
CYC 1
PI US 5066674 A 19911119 (199149)*
ADT US 5066674 A US 1990-533079 19900604
PRAI US 1990-533079 19900604
AB US 5066674 A UPAB: 19930928
The carbamate ester is of formula Z-X-C(=Y)NHR (I), Z = 2-naphthyl (opt. substd. by 1-8C alkyl, halogen, or 1-8C alkoxy) or p-acetamidophenyl. X and Y = O. R = 1-8C alkyl.
USE/ADVANTAGE - (I) act as pancreatic **cholesterol esterase** (CEase) inhibitors, for use as hypolipadaemic and hypocaloric agents. They pass through the GI tract unchanged, as they are poorly absorbed into the blood-stream and are resistant to CEase-catalysed hydrolysis. The method is useful in the treatment of obesity and **atherosclerosis**. Unit dosage of (I) is 0.01-1.0 mg/kg. administered orally.
In an example, cpds. (I) tested as inhibitors of the CEase-catalysed hydrolysis of p-nitrophenyl butyrate. The half-life of irreversible inhibition in the presence of 10 power -5 M inhibitor was 0.86 minutes for 2-naphthyl-n-octyl carbamate, 2.3 minutes for p-acetamidophenyl-n-hexyl carbamate and 29 minutes for p-acetamidophenyl n-butyl carbamate.
0/0

L10 ANSWER 17 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1991-150354 [21] WPIDS
DNC C1991-065001
TI 4-phenoxy phenyl carbamate ester derivs. - useful as **cholesterol ester hydrolase** inhibitors to treat coronary heart disease, **atherosclerosis**, etc..
DC B03 B05
IN COMMONS, T J; MEWSHAW, R E; STRIKE, D P; NEWSHAW, R E
PA (AMHP) AMERICAN HOME PROD CORP
CYC 10
PI EP 428385 A 19910522 (199121)*
GB 2238542 A 19910605 (199123)
HU 55352 T 19910528 (199127)
CA 2029934 A 19910516 (199130)
FI 9005558 A 19910516 (199133)
PT 95869 A 19910913 (199140)
AU 9066534 A 19910718 (199141)
JP 03206071 A 19910909 (199142)
ZA 9009103 A 19920729 (199235) 71p
NZ 236061 A 19930225 (199312)
AU 635087 B 19930311 (199317)
HU 207842 B 19930628 (199332)
GB 2238542 B 19930901 (199335)
US 5391571 A 19950221 (199513) 16p
US 5512565 A 19960430 (199623) 12p
US 5602151 A 19970211 (199712) 11p
ADT EP 428385 A EP 1990-312382 19901113; GB 2238542 A GB 1990-24693 19901113; JP 03206071 A JP 1990-311216 19901115; ZA 9009103 A ZA 1990-9103 19901113;

NZ 236061 A NZ 1990-236061 19901113; AU 635087 B AU 1990-66534 19901113; HU 207842 B HU 1990-7132 19901115; GB 2238542 B GB 1990-24693 19901113; US 5391571 A CIP of US 1989-436841 19891115, Cont of US 1990-594241 19901009, Cont of US 1991-771580 19911004, US 1993-62026 19930513; US 5512565 A CIP of US 1989-436841 19891115, Cont of US 1990-594241 19901009, Cont of US 1991-771580 19911004, Div ex US 1993-62026 19930513, Div ex US 1994-277396 19940719, US 1995-413559 19950330; US 5602151 A CIP of US 1989-436841 19891115, Cont of US 1990-594241 19901009, Cont of US 1991-771580 19911004, Div ex US 1993-62026 19930513, Div ex US 1994-277396 19940719, US 1995-572993 19951215

FDT AU 635087 B Previous Publ. AU 9066534; HU 207842 B Previous Publ. HU 55352; US 5512565 A Div ex US 5391571; US 5602151 A Div ex US 5391571

PRAI US 1990-594241 19901009; US 1989-436841 19891105; GB 1990-5537 19900312; US 1991-771580 19911004; US 1993-62026 19930513; US 1994-277396 19940719; US 1995-413559 19950330; US 1995-572993 19951215

AB EP 428385 A UPAB: 19930928

4-Phenoxyphenyl carbamate of formula (I) and their salts are new.

R1= opt. unsatd. 4-20C alkyl, 3-8C cycloalkyl, 1- or 2-adamantyl, 3-noradamantyl, 3-methyl-1-adamantyl, 1- or 9-fluorenyl, (3-8C cycloalkyl)-(1-6C alkyl), phenyl or phenyl-(1-20C alkyl). R2= H or 1-6C alkyl or R1 and R2 together form a heterocycle (i). X= -C(R7)(R8)-, NR9, O or S. R7= H, 1-6C alkyl, OH, 2-6C alkanoyloxy, 1-6C hydroxyalkyl, CO2H, 2-16C alkoxycarbonyl or phenyl. R8= H or 1-6C alkyl or R7 and R8 together are (CH2)m where m=2-6. R9= H, 1-6C alkyl, or phenyl, halo, NO2, or CN. R10= H, 1-6C alkyl or 2-12C gem-dialkyl. n=0,1 or 2. R3, R4, R5, R6= independently H, 1-6C alkyl, alkoxy, or perhaloalkyl halo, NO2, CN, CO2H or 2-16C alkoxycarbonyl. When X= NR9 or R7= aminoalkyl, (I) can be present in salt form.

USE/ADVANTAGE - As inhibitors of **cholesterol ester hydrolase**. (I) are therefore useful to treat coronary heart disease, . **atherosclerosis**, familial hypercholesterolaemia, hyperlipaemia, etc.

0/0

L10 ANSWER 18 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1990-348258 [46] WPIDS
CR 1991-178095 [24]; 1996-087083 [09]
DNC C1990-151144
TI Inhibition of intestinal cholesterol absorption - by oral admin of non-absorbable inhibitor of **cholesterol esterase**, esp. high mol.wt. sulphated polysaccharide.
DC B04 D16
IN LANGE, L G; SPILBURG, C A
PA (LANG-I) LANGE L G; (SPIL-I) SPILBURG C A; (SCHI-I) SCHIERANO P
CYC 17
PI WO 9012579 A 19901101 (199046)* 49p
RW: AT BE CH DE DK ES FR GB IT LU NL SE
W: AU CA JP US
AU 9055356 A 19901116 (199107)
US 5017565 A 19910521 (199123) 8p
US 5063210 A 19911105 (199147) 11p
EP 469079 A 19920205 (199206)
R: AT BE CH DE ES FR GB IT LI LU NL SE
JP 04503813 W 19920709 (199234) 19p
AU 633569 B 19930204 (199312)
EP 469079 B1 19941207 (199502) EN 29p
R: AT BE CH DE DK ES FR GB IT LI LU NL SE
DE 69014870 E 19950119 (199508)
ES 2064736 T3 19950201 (199511)
JP 08019001 B2 19960228 (199613) 19p
US 5616570 A 19970401 (199719)# 20p
CA 2053258 C 19980210 (199817)

US 5792832 A 19980811 (199839)

ADT US 5017565 A US 1989-340868 19890420; US 5063210 A US 1989-429398 19891031; EP 469079 A EP 1990-907923 19900420; JP 04503813 W JP 1990-506819 19900420, WO 1990-US2079 19900420; AU 633569 B AU 1990-55356 19900420; EP 469079 B1 EP 1990-907923 19900420, WO 1990-US2079 19900420; DE 69014870 E DE 1990-614870 19900420, EP 1990-907923 19900420, WO 1990-US2079 19900420; ES 2064736 T3 EP 1990-907923 19900420; JP 08019001 B2 JP 1990-506819 19900420, WO 1990-US2079 19900420; US 5616570 A Cont of WO 1990-US2079 19900420, Cont of US 1991-773875 19911018, US 1994-283723 19940801; CA 2053258 C CA 1990-2053258 19900420; US 5792832 A Cont of US 1989-429398 19891031, Cont of US 1989-434899 19891113, Cont of US 1992-856910 19920512, Div ex US 1994-350801 19941207, US 1995-461881 19950605

FDT JP 04503813 W Based on WO 9012579; AU 633569 B Previous Publ. AU 9055356, Based on WO 9012579; EP 469079 B1 Based on WO 9012579; DE 69014870 E Based on EP 469079, Based on WO 9012579; ES 2064736 T3 Based on EP 469079; JP 08019001 B2 Based on JP 04503813, Based on WO 9012579; US 5792832 A Cont of US 5173408

PRAI US 1989-429398 19891031; US 1989-340868 19890420; US 1994-283723 19940801; US 1989-434899 19891113; US 1992-856910 19920512; US 1994-350801 19941207; US 1995-461881 19950605

AB WO 9012579 A UPAB: 19991221

Ingestible food prod. contains an effective amt. of a non-absorbable synthetic **cholesterol esterase** inhibitor (I).

Inhibiting the intestinal absorption of cholesterol comprises admin. p.o. a non-absorbable inhibitor of **cholesterol esterase** or an antibody directed against **cholesterol esterase.**

Reducing serum cholesterol levels comprises admin. of a synthetic non-absorbable sulphated polysaccharide in combination with an absorbed cholesterol synthesis blocker, triglyceride lipase inhibitor or fatty acyl cholesterol O-acyl transferase (ACAT) inhibitor.

USE/ADVANTAGE - (I), esp. sulphonated polysaccharides, decrease intestinal absorption of cholesterol and fatty acid by inhibiting pancreatic **cholesterol esterase**, which is a key enzyme involved in dietary cholesterol absorption. (I) are stable and can be incorporated in food prods., including baked prods. for dietary control of serum cholesterol levels and **atherosclerosis** (I) are potent inhibitors; are non-absorbable, so that side-effects are reduced; and are inexpensive. Doses of cholesterol synthesis blockers or ACAT inhibitors can be reduced, and side-effects minimized, by use with (I).

Dwg.0/10

L10 ANSWER 19 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

AN 1990-218740 [29] WPIDS

DNN N1990-169759 DNC C1990-094452

TI Determn. of net high density lipoprotein cholesterol content of serum - by pptn. of other lipoprotein(s) then assaying cholesterol in lipase treated and untreated samples, for assessing risk of vascular disease.

DC B04 D13 S03

IN MAINES, R Q

PA (MAIN-I) MAINES R Q

CYC 14

PI EP 378395 A 19900718 (199029)*
R: AT BE CH DE ES FR GB LI LU NL SE
CA 2007645 A 19900713 (199039)
EP 378395 A3 19920701 (199333)
US 5453358 A 19950926 (199544) 5p
EP 378395 B1 19960814 (199637) EN 12p
R: AT BE CH DE DK ES FR GB LI LU NL SE
DE 69028023 E 19960919 (199643)

ADT EP 378395 A EP 1990-300287 19900110; EP 378395 A3 EP 1990-300287 19900110; US 5453358 A Cont of US 1989-297080 19890113, US 1992-941669 19920908; EP 378395 B1 EP 1990-300287 19900110; DE 69028023 E DE 1990-628023 19900110,

EP 1990-300287 19900110
FDT DE 69028023 E Based on EP 378395
PRAI US 1989-297080 19890113; US 1992-941669 19920908
AB EP 378395 A UPAB: 19931119
Determin. of the net HDL cholesterol content of blood serum comprises (1) treating a sample with a pptg. agent which combines with LDL and VLDL particles in the serum; (2) centrifuging to remove ppte., leaving supernatant contg. HDL and free cholesterol (ch); (3) treating supernatant with enzyme which de-esterifies (ch), so as to break down HDL particles into (Ch) and fatty acid; (4) treating with (Ch) oxidase to oxidise all (Ch)to H2O2 and cholest-4-en-3-one; (5) treating with peroxidase (POD); 4-amine-antipyrine (4AAP) and chromogen to convert the H2O2 producedto a quinone imine (QI); (6) measuring the absorbance of QI at a suitable wavelength; (7) repeating steps (3-6) on at least one (Ch)-contg. standard; (8) calculating the concn. of HDL and non-pptd. (Ch) from the equation (HDL + free (Ch) concn.) = S.C. x 2As/Ast. (As and Ast = absorbance of sample and standard respectively; S.C = concn. of the standard); (9) repeating steps (4-6) on separate samples of supernatant and standard, (10) calculating the non-pptd. free (Ch) concn. from the eqn. free (Ch) concn. = S.C. x 2As/Ast and (11) calculating net HDL cholesterol by subtraction of results from steps (8) and (10).

Also new is an emulsified diet supplement for increasing % HDL cholesterol in the blood consisting of a polyunsatd. lipid, phospholipid contg. essential fatty acids; a polysaccharide and an antioxidant.

USE - The measurement of HDL cholesterol is used to diagnose (and assess the risk of) vascular disease and **atherosclerosis**. The new diet supplement reduces the risk of such diseases. @(9pp Dwg.No.0/0) 0/0

L10 ANSWER 20 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1989-357528 [49] WPIDS
DNN N1989-271750 DNC C1989-158494
TI Determn. of cholesterol-contg. lipo protein fractions - by electrophoresis on a thin-layer carrier matrix.
DC B04 D16 S03 S05
IN AUFENANGER, J
PA (AUFE-I) AUFENANGER J; (IMMO) IMMUNO CHEM MEDIZINISCHE PROD; (IMMO) IMMUNO AG; (IMMO) IMMUNO CHEM MEDIZINISCHE PROD AG
CYC 11
PI DE 3817747 A 19891130 (198949)* 6p
EP 344580 A 19891206 (198949) DE
R: AT BE CH DE FR GB IT LI NL SE
EP 344580 B1 19941228 (199505) DE 9p
R: AT BE CH DE FR GB IT LI NL SE
DE 58908816 G 19950209 (199511)
US 5385828 A 19950131 (199511)# 6p
ADT DE 3817747 A DE 1988-3817747 19880525; EP 344580 A EP 1989-109261 19890523; EP 344580 B1 EP 1989-109261 19890523; DE 58908816 G DE 1989-508816 19890523, EP 1989-109261 19890523; US 5385828 A Cont of US 1989-359800 19890601, US 1992-981992 19921124
FDT DE 58908816 G Based on EP 344580
PRAI DE 1988-3817747 19880525
AB DE 3817747 A UPAB: 19930923
(A) In a new procedure for the determination of the relative amounts of all cholesterol-contg. lipoproteins in body fluids in which the lipoproteins of an aliquot of body fluid are separated electrophoretically on a carrier matrix and subsequently detected by means of an enzymatic reaction comprising incubation of the carrier matrix with cholesterolase and cholesterol dehydrogenase, leading to the formation of a detectable complex, and the relative amounts of the different lipoprotein classes are determined, the electrophoresis is carried out on a thin-layer matrix. (B) In a new procedure for the determination of the concentration of all cholesterol-contg. lipoproteins in body fluids, the

relative amounts determined by the above procedure are expressed in proportion to the total cholesterol concentration of the body fluid.

USE/ADVANTAGE - Determination of low- and high-density lipoprotein cholesterol as an aid to the diagnosis of susceptibility to **atherosclerosis** and cardiac infarction. The procedure is rapid, reliable and reproducible, and gives results in archivable form.

L10 ANSWER 21 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1989-292337 [40] WPIDS
DNC C1989-129545
TI Inhibition of intestinal cholesterol and fatty acid absorption - by admin. of heparin, its sub-fraction or heparinase.
DC B04 D16
IN KINNUNEN, P M; LANGE, L G; SPILBURG, C A
PA (LANG-I) LANGE L G; (CVTH-N) CV THERAPEUTICS; (JEWI-N) JEWISH HOSPITAL ST
CYC 13
PI WO 8908456 A 19890921 (198940)* 35p
RW: AT BE CH DE FR GB IT LU NL SE
W: AU JP
AU 8934348 A 19891005 (199001)
US 5352601 A 19941004 (199439) 14p
US 5429937 A 19950704 (199532) 13p
US 5492822 A 19960220 (199613) 12p
ADT WO 8908456 A WO 1989-US787 19890227; US 5352601 A CIP of US 1988-168424 19880315, Cont of US 1989-312255 19890222, Cont of US 1990-544212 19900626, Cont of US 1991-655289 19910214, US 1992-936103 19920826; US 5429937 A CIP of US 1988-168424 19880315, Cont of US 1989-312255 19890222, Cont of US 1990-544212 19900626, Cont of US 1991-655289 19910214, Div ex US 1992-936103 19920826, US 1994-311862 19940926; US 5492822 A CIP of US 1988-168424 19880315, Cont of US 1989-312255 19890222, Cont of US 1990-544212 19900626, Cont of US 1991-655289 19910214, Div ex US 1992-936103 19920826, Div ex US 1994-311862 19940926, US 1995-386433 19950210
FDT US 5429937 A Div ex US 5352601; US 5492822 A Div ex US 5352601, Div ex US 5429937
PRAI US 1989-312255 19890222; US 1988-168424 19880315; US 1990-544212 19900626; US 1991-655289 19910214; US 1992-936103 19920826; US 1994-311862 19940926; US 1995-386433 19950210
AB WO 8908456 A UPAB: 19930923
Inhibiting intestinal cell endogenous heparin mediated absorption of cholesterol or fatty acids in mammals comprises orally administering heparin, an active heparin subfraction or heparinase.

USE - Heparin can compete for binding to **cholesterol esterase**, displacing the enzyme from the membrane of the intestinal cell and greatly diminishing the intestinal absorption of cholesterol and cholesterol derived fatty acids. Also exogenous heparin displaces the pancreatic enzymes, such as triglyceride lipase which hydrolyse triglycerides into free fatty acids, from the membrane of the intestinal cell.
6

L10 ANSWER 22 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1988-285789 [41] WPIDS
DNN N1988-217232 DNC C1988-126927
TI New sterol polyene derivs. - useful as fluorescent membrane probes.
DC B01 B04 S03
IN DREW, J; PROULX, P R; SZABO, A G
PA (CANA) CANADIAN PATENTS & DEV LTD; (MORA-I) MORAND P; (CANA) NAT RES COUNCIL CANADA; (UYOT-N) UNIV OTTAWA
CYC 2
PI CA 1241947 A 19880913 (198841)* 27p
US 4879069 A 19891107 (199003) 10p
US 4980280 A 19901225 (199103)

ADT CA 1241947 A CA 1985-482887 19850531; US 4879069 A US 1986-867565 19860528; US 4980280 A US 1989-359368 19890531
PRAI CA 1985-482887 19850531
AB CA 1241947 A UPAB: 19930923
Olefinic sterol derivs. of formula (I) are new, where R=H or an acyl gp. suitable for use in **cholesterol esterase** assays; A=a polyene gp. of formula A1-A4, R1=H, 1-4C alkyl, 2-4C alkenyl, 2-4C alkynyl or aryl; R2=(CH=CH)nQ; n=0-3; Q=CH=CH2, phenyl, naphthyl, tricyclic aryl, tetracyclic aryl or a sterol gp. of formula Q1.
USE - (I) are useful as fluorescent probes for investigating the behaviour of cholesterol in vivo, for investigating the properties and cholesterol content of cell membranes, and for investigation and early diagnosis of **atherosclerosis**.
0/0

L10 ANSWER 23 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1988-269131 [38] WPIDS
DNN N1988-204158 DNC C1988-120103
TI Lipid analysis in blood serum or plasma - involves liq. chromatography and preliminary enzymatic hydrolysis of stabilising proteins, to increase accuracy.
DC B04 D16 S03
IN DVORKIN, V I; VAVKUSHEVS, I N; ZOLOTOV, N N
PA (AMCA-R) A MED CARDIOL CENTR
CYC 1
PI SU 1377733 A 19880229 (198838)* 3p
ADT SU 1377733 A SU 1985-3922509 19850704
PRAI SU 1985-3922509 19850704
AB SU 1377733 A UPAB: 19930923
To determine glycerides treatment (of the sample) involves phospholipase. To determine ethers (
) of cholesterol and steroids treatment involves lipase. To determine phospholipides treatment involves **cholesterol-esterase**
. As previously, the method involves:- extg. lipids by an organic solvent; liq. chromatography.
USE/ADVANTAGE - Increased accuracy in the analysis of lipids in blood serum or plasma in biochemistry and medical practice, esp. in investigation of lipid exchange and pathogenesis of **atherosclerosis**. Typically, in analysis of cholesterol ethers the proposed method reduces the error from 100+% to 4-6%. In analysis of acyglycerol the proposed method reduces error from 10-12% to 5-6%.
Bul.8/29.2.88.
0/0

L10 ANSWER 24 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1988-121051 [18] WPIDS
DNN N1988-091887 DNC C1988-054205
TI Specific measurement of high density lipoprotein cholesterol in serum - by incubation with esterase and oxidase, and kinetic monitoring of hydrogen peroxide formation.
DC A96 B04 D16 S03
IN KERSCHER, L; PAUTZ, B; TRUNK, G; ZIEGENHORN, J
PA (BOEF) BOEHRINGER MANNHEIM GMBH; (BOEF) OEHRINGER MANNHEIM GMBH
CYC 20
PI EP 265933 A 19880504 (198818)* DE 16p
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
DE 3636851 A 19880511 (198820)
AU 8780446 A 19880505 (198826)
JP 63126498 A 19880530 (198827)
FI 8704749 A 19880430 (198831)
US 4892815 A 19900109 (199010) 11p
CA 1309645 C 19921103 (199250)
EP 265933 B1 19930203 (199305) DE 19p

R: AT BE CH DE ES FR GB GR IT LI LU NL SE
DE 3784004 G 19930318 (199312)
FI 90882 B 19931231 (199404)
JP 07034760 B2 19950419 (199520) 10p
ADT EP 265933 A EP 1987-115841 19871028; DE 3636851 A DE 1986-3636851 19861029; JP 63126498 A JP 1987-269522 19871027; US 4892815 A US 1987-107467 19871006; CA 1309645 C CA 1987-549035 19871009; EP 265933 B1 EP 1987-115841 19871028; DE 3784004 G DE 1987-3784004 19871028, EP 1987-115841 19871028; FI 90882 B FI 1987-4749 19871028; JP 07034760 B2 JP 1987-269522 19871027
FDT DE 3784004 G Based on EP 265933; FI 90882 B Previous Publ. FI 8704749; JP 07034760 B2 Based on JP 63126498
PRAI DE 1986-3636851 19861029
AB EP 265933 A UPAB: 19950530
Specific determination of HDL-cholesterol in presence of the LDL fraction of serum lipoproteins comprises treating with **cholesterol esterase** (CE) to release cholesterol which is oxidised with cholesterol oxidase (CO) and O2 to form H2O2, then kinetic measurement of H2O2 formation or of O2 consumption.

The new feature is that measurement is carried out at 2-15 min after start of oxidase reaction at 20-40 deg C for a predetermined time interval. During measurement concns maintained in the reaction soln are: CE 0.05-30 u/ml; Co 0.1-50 U/ml; bile acid surfactant 1-20 mM and nonionic surfactant 0.1-10 g/l, while pH is 5-9. Also new is a reagent which provides the specified concns. of CO, CE and surfactants, plus pH 5-9 buffer and a system for photometric measurement of H2O2.

ADVANTAGE - The HDL component is measured with a simple reagent in a single step, and the same sample can also be used to provide a measure of total cholesterol.

0/5
Dwg.0/5

L10 ANSWER 25 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1987-087376 [13] WPIDS
DNN N1987-065510 DNC C1987-036259
TI HDL cholesterol specific determination in serum or plasma - by incubation with cholesterol oxidase and a nonionic detergent.
DC A96 B04 D16 S03
IN KERSCHER, L; PAUTZ, B; SIEDEL, J; ZIEGENHORN, J
PA (BOEF) BOEHRINGER MANNHEIM GMBH
CYC 19
PI DE 3533288 A 19870326 (198713)* 8p
EP 218127 A 19870415 (198715) DE 11p
R: AT BE CH DE FR GB IT LI LU NL SE
AU 8661163 A 19870319 (198718)
JP 62069999 A 19870331 (198718)
FI 8603752 A 19870319 (198727)
DK 8604459 A 19870319 (198731)
ES 2001417 A 19880516 (198921)
US 4851335 A 19890725 (198937) 7p
EP 218127 B 19891213 (198950) DE
R: AT BE CH DE FR GB IT LI LU NL SE
DE 3667492 G 19900118 (199004)
KR 8903948 B 19891013 (199040)
JP 06016720 B2 19940309 (199413)
ADT DE 3533288 A DE 1985-3533288 19850918; EP 218127 A EP 1986-112875 19860910; JP 62069999 A JP 1986-218274 19860918; ES 2001417 A ES 1986-1650 19860905; US 4851335 A US 1986-908031 19860916; EP 218127 B EP 1986-112875 19860918; JP 06016720 B2 JP 1986-218274 19860918
FDT JP 06016720 B2 Based on JP 62069999
PRAI DE 1985-3533288 19850918
AB DE 3533288 A UPAB: 19930922
A specific determination of HDL-cholesterol in serum or plasma by

incubation with a cholesterol detection system contg. cholesterol oxidase and **cholesterol esterase** in buffered aq. medium and measurement of a prod. of the cholesterol oxidase reaction or oxygen consumption comprises (1) an incubation carried out in the presence of a bile acid or bile acid deriv. salt or of dioctyl sulphosuccinate, (2) carrying out a first measurement, (3) a non-ionic detergent contg. polyethylene oxide gps. or a sec. alkanesulphonate is added and the mixt. is again incubated, (4) a second measurement is carried out, and (5) the HDL-cholesterol amt. is determined from the difference between the first and second measurements.

New reagent of the new specific determination contains amts. w.r.t. ready-to-use aq. soln. 0.1-10 U/ml **cholesterol esterase**, 0.005-10 U/ml cholesterol oxidase, 20-500 mmol/l buffer substance pH 6.0-8.0, 0.2-20 mmol/l bile acid or bile acid deriv. salt or dioctyl-sulphosuccinate and, separately, 0.02-2% non-ionic detergent contg. polyethylene oxide gps. or sec. alkanesulphonate and, opt. 0.05-2% 1-3C alcohol.

USE/ADVANTAGE - Determination of the fraction of cholesterol bound in HDL- in the diagnosis of **atherosclerosis** or of the risk of cardiac infarct. HDL-cholesterol can be determined directly without previous sepn. of LDL-cholesterol esters, VLDL-cholesterol esters, VLDL-cholesterol and chylomicron-cholesterol from the specimen.
0/2

L10 ANSWER 26 OF 26 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1983-766269 [38] WPIDS
DNC C1983-089829
TI Low density lipoprotein fraction cholesterol specific determn. - in presence of high-density lipoprotein fraction using **cholesterol esterase** and **cholesterol** oxidase in the presence of surfactant.
DC B04 D16 J04
IN BARTL, K; RODER, A; WEHMEYER, G; ZIEGENHORN, J
PA (BOEF) BOEHRINGER MANNHEIM GMBH
CYC 13
PI EP 88420 A 19830914 (198338)* DE 21p
R: AT BE CH DE FR GB IT LI LU NL SE
DE 3208253 A 19830915 (198338)
JP 58165800 A 19830930 (198345)
US 4544630 A 19851001 (198542)
EP 88420 B 19860924 (198639) DE
R: AT BE CH DE FR GB IT LI LU NL SE
DE 3366371 G 19861030 (198645)
ADT EP 88420 A EP 1983-102231 19830307; US 4544630 A US 1983-468792 19830222
PRAI DE 1982-3208253 19820308
AB EP 88420 A UPAB: 19930925
New procedure is claimed for the specific determination of LDL-fraction cholesterol in the presence of the serum lipoprotein HDL fraction involving the use of **cholesterol esterase** to release the cholesterol, oxidation of the released cholesterol with cholesterol oxidase and oxygen to form H2O2 and cholestenone, and kinetic measurement of the change in one of the components of the oxidase reaction (esp. H2O2 formation). In this procedure, the measurement is carried out in a predetermined time interval, and the reaction soln. is adjusted to a surfactant concn. of 0.01-1.5 mmol/l, a **cholesterol esterase** concn. of 0.1-30U/ml, and a pH of 6.5-8.0.

New reagent for carrying out the above procedure contains 200-1000 U/l cholesterol oxidase, 1000-3000 U/l peroxidase, 2000-10000 U/l **cholesterol esterase**, 0.10-0.16 mmol/l surfactant, 2-20 mmol/l phenol, 0.5-3 mmol/l 4-aminoantipyrine, and 70-130 mmol/l tris/HCl pH 7.3-7.7.

Determination of LDL (low density lipoprotein)fraction cholesterol for the differential diagnosis of lipid metabolism disorders, e.g.

hyparcholesterolasmia of hypertriglyceridaemia leading to **atherosclerosis** and cardia infarct.

The new procedure permits direct enzymatic determination of LDL cholesterol without precipitation reactions of fraction separations. It is based on the finding that under specified surfactant concn., enzyme concn. and pH conditions enzymatic hydrolysis of the LDL-cholesterol is substantially faster than that of HDL-cholesterol.

0/3

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FROM JANUARY 1969 TO DATE.

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     FILE 'REGISTRY' ENTERED AT 12:17:09 ON 18 OCT 2001
               E LYSOSOMAL ACID LIPASE/CN
L1             1 S E3

     FILE 'BIOSIS' ENTERED AT 12:17:25 ON 18 OCT 2001
L2           776 S L1
L3          1315 S ESTERASE (2A) CHOLESTEROL? OR CHOLESTERASE# OR CHOLESTERIN ES
L4           231 S LYSOSOMAL ACID LIPASE# OR STEROL (W) (ESTER HYDROLASE# OR EST
L5          1531 S L2-L4
L6         49186 S ATHEROSCLER? OR ANTIARTERIOSCLER? OR ANTIATHEROSCLER?
L7           142 S L5 AND L6
L8         17840 S MANNOSE OR ACETYL GLYCOSLYLAT? OR ACETYLGLYCOSYLAT?
L9         17841 S MANNOSE OR ACETYL GLYCOSYLAT? OR ACETYLGLYCOSYLAT?
L10       110369 S VECTOR#
L11          326 S WOLMAN? OR CHOLESTER? ESTER STORAGE DISEAS?
L12            0 S L7 AND L9
L13            0 S L7 AND L10
L14           14 S L7 AND L11
L15            5 S LIPID HYDROLYZ? (2A) (PROTEIN# OR POLYPEPTIDE# OR ENZYME?)
L16            0 S L15 AND L6
L17            0 S PLASMID? AND L7
L18        17373 S LYSOSOME?
L19           13 S L18 AND L7
L20          326 S RECEPTOR# (5A) L18
L21            0 S L20 AND L7
L22       205801 S MUTAT?
L23            7 S L7 AND L22
L24           15 S L14 OR L23

     FILE 'BIOSIS' ENTERED AT 12:27:16 ON 18 OCT 2001

=> d bib ab it 1-15

L24  ANSWER 1 OF 15  BIOSIS  COPYRIGHT 2001 BIOSIS
AN   2000:159815  BIOSIS
DN   PREV200000159815
TI   Subclinical course of cholesteryl ester
     storage disease in an adult with hypercholesterolemia,
     accelerated atherosclerosis, and liver cancer.
AU   Elleder, Milan (1); Chlumska, Alena; Hyanek, Josef; Poupetova, Helena;
     Ledvinova, Jana; Maas, Sylke; Lohse, Peter
```

CS (1) Institute of Inherited Metabolic Disorders, 1st Faculty of Medicine and General Faculty Hospital, Charles University Prague, Ke Karlovu 2, 128 00, Praha, 2 Czech Republic

SO Journal of Hepatology., (March, 2000) Vol. 32, No. 3, pp. 528-534. ISSN: 0168-8278.
DT Article
LA English
SL English

AB Few cases of asymptomatic **cholesteryl ester storage disease** (CESD) due to low enzymatic activity of human **lysosomal acid lipase/cholesteryl ester hydrolase** (hLAL) have been reported thus far in adults. Here, we describe a 51-year-old man with a long clinical history of mixed hyperlipoproteinemia and severe premature **atherosclerosis**, but with no signs of hepatomegaly, liver dysfunction, or splenomegaly. The disease was discovered by chance in a biopsy performed because of suspected liver cancer (proven to be a cholangiocarcinoma). Residual hLAL activity in peripheral leukocytes was determined to be 6% of control values. DNA sequence and restriction fragment length polymorphism analysis demonstrated that the patient was a compound heterozygote for the prevalent CESD exon 8 splice site **mutation** (G934A) and the deletion of a C (nucleotide 673, 674, or 675) in exon 6 of the hLAL gene, resulting in premature termination of protein translation at residue 195. The patient died of liver failure as a consequence of extensive tumor infiltration at age 52. Lipid analysis revealed moderate cholesteryl ester storage in the liver and in the suprarenal cortex, and massive accumulation in the testicular histiocytes and Leydig cells, resulting in a pronounced secondary atrophy of the seminiferous tubules. Our case study demonstrates that hepatomegaly is an inconstant feature, even in CESD patients compound heterozygous for a **Wolman mutation** which results in complete loss of hLAL enzymic activity. It also highlights the need to be aware of this condition as it may be underdiagnosed.

IT Major Concepts
Cardiovascular Medicine (Human Medicine, Medical Sciences); Gastroenterology (Human Medicine, Medical Sciences); Oncology (Human Medicine, Medical Sciences); Metabolism

IT Diseases
atherosclerosis: vascular disease; **cholesteryl ester storage disease**: clinical pathology, diagnosis, genetic disease, histopathology, metabolic disease; hypercholesterolemia: metabolic disease; liver cancer: digestive system disease, neoplastic disease; liver failure: digestive system disease

IT Chemicals & Biochemicals
human **lysosomal acid lipase/cholesteryl ester hydrolase**: activity; human hLAL gene [human **lysosomal acid lipase/cholesteryl ester hydrolase** gene] (Hominidae): **mutation**

IT Alternate Indexing
Atherosclerosis (MeSH); Hypercholesterolemia (MeSH); Liver Neoplasms (MeSH); Liver Failure (MeSH)

IT Methods & Equipment
DNA sequencing: genetic method; HPTLC chromatography: analytical method; electron microscopy: microscopy method; liver biopsy: diagnostic method; restriction fragment length polymorphism analysis: genetic method

IT Miscellaneous Descriptors
Case Study

ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
human (Hominidae): male, middle age, patient

ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Primates; Vertebrates

L24 ANSWER 2 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1999:516512 BIOSIS
DN PREV199900516512
TI Hepatosplenomegalic lipidosis: What unless Gaucher? Adult **cholesteryl ester storage disease** (CESD) with anemia, mesenteric lipodystrophy, increased plasma chitotriosidase activity and a homozygous **lysosomal acid lipase** -1 exon 8 splice junction **mutation**.
AU vom Dahl, Stephan (1); Harzer, Klaus; Rolfs, Arndt; Albrecht, Bettina; Niederau, Claus; Vogt, Christoph; van Weely, Sonja; Aerts, Johannes; Mueller, Gerd; Haeussinger, Dieter
CS (1) Division of Gastroenterology, Heinrich-Heine-University, Moorenstrasse 5, D-40 225, Duesseldorf Germany
SO Journal of Hepatology, (Oct., 1999) Vol. 31, No. 4, pp. 741-746. ISSN: 0168-8278.
DT Article
LA English
SL English
AB A 36-year-old woman was admitted for hepatosplenomegaly and anemia. Bone marrow cytology showed "sea-blue histiocytes", vacuolated macrophages and plasma cells. As primary liver disease, malignancy or hematologic disorders were excluded, and plasma chitotriosidase activity was increased 27-fold over control, the presence of a lysosomal storage disease was suspected. Biochemical analysis of skin fibroblasts revealed normal glucocerebrosidase and sphingomyelinase activity, but lipid analysis showed a more than 15-fold accumulation of cholesterol esters within the cells. The activity of **lysosomal acid lipase** (LAL) in fibroblast homogenates was decreased to 12% of control subjects. **Mutational** analysis of the patient's blood showed the homozygous GfwdarwA **mutation** at position -1 of the exon 8 splice donor site (E8SJM-allele) known for adult **cholesteryl ester storage disease** (CESD); the polymorphic background was that of the complex haplotype -6Thr, 2Gly, 894 GfwdarwA. Based on clinical, laboratory, cytological and and biochemical findings, CESD can clearly be separated from other more frequent inherited lysosomal storage diseases, e.g. atypical forms of Gaucher disease.
IT Major Concepts
Gastroenterology (Human Medicine, Medical Sciences); Medical Genetics (Allied Medical Sciences); Metabolism
IT Diseases
anemia: blood and lymphatic disease; **atherosclerosis**: vascular disease; chitotriosidase: activity; **cholesteryl ester storage disease**: genetic disease, metabolic disease; hepatosplenomegaly: blood and lymphatic disease, digestive system disease; hypercholesterolemia: metabolic disease; mesenteric lipodystrophy: congenital disease, genetic disease, metabolic disease, digestive system disease; sea-blue histiocytes: blood and lymphatic disease, genetic disease, metabolic disease; Gaucher disease: behavioral and mental disorders, genetic disease, metabolic disease, blood and lymphatic disease; Niemann-Pick disease: behavioral and mental disorders, blood and lymphatic disease, genetic disease, metabolic disease, nervous system disease
IT Chemicals & Biochemicals
lysosomal acid lipase: activity; human **lysosomal acid lipase** gene (Hominidae): exon 8, homozygous splice junction **mutation**
IT Alternate Indexing
Anemia (MeSH); **Atherosclerosis** (MeSH); Gaucher's Disease (MeSH); Hypercholesterolemia (MeSH); Niemann-Pick Disease (MeSH)
IT Miscellaneous Descriptors

Case Study
ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
human (Hominidae): adult, female, patient
ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Primates; Vertebrates
RN **9026-00-0 (LYSOSOMAL ACID LIPASE)**

L24 ANSWER 3 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1999:441210 BIOSIS
DN PREV199900441210
TI Splice-site **mutations** in **atherosclerosis** candidate genes: Relating individual information to phenotype.
AU von Kodolitsch, Yskert; Pyeritz, Reed E.; Rogan, Peter K. (1)
CS (1) Section of Molecular Genetics and Molecular Medicine, Children's Mercy Hospital and Clinics, 2401 Gillham Road, Kansas City, MO, 64108 USA
SO Circulation, (Aug. 17, 1999) Vol. 100, No. 7, pp. 693-699. ISSN: 0009-7322.
DT Article
LA English
SL English
AB Background-Nucleotide variants in several genes for lipid and methionine metabolism influence the risk of premature **atherosclerosis**. Ten percent of single nucleotide substitutions in these genes involve mRNA splice sites. The effects of some of these changes on splicing and on phenotypic severity are not inherently obvious. Methods and Results-Using an information theory-based model, we measured the individual information content (Ri, in bits) of splice sites adjacent to 289 **mutations** (including 31 splice-site **mutations**) in the **atherosclerosis** candidate genes APOAII, APOB, APOCII, APOE, CBS, CETP, LCAT, LIPA, LDLR, and LPL. The predictions of information analysis were then corroborated by published mRNA analyses. The Ri values of mutant sites were consistent with either complete (n=17) or partial (n=8) inactivation of these sites. Seven **mutations** were predicted to activate cryptic splice sites. Predicted inactive mutant sites were associated with either "average" or "severe" dyslipidemia and commensurate reductions in protein levels or activity, whereas **mutations** expected to exhibit residual splicing had average or "mild" effects on lipid and protein expression. Conclusions-Information analysis of splice-junction variants in **atherosclerosis** candidate genes distinguishes inactive from leaky splice sites and identifies activated cryptic sites. Predicted changes in splicing were related to phenotypic severity.
IT Major Concepts
Cardiovascular System (Transport and Circulation); Molecular Genetics (Biochemistry and Molecular Biophysics)
IT Diseases
atherosclerosis: phenotypic severity, vascular disease
IT Chemicals & Biochemicals
human APOAII gene [human apolipoprotein-AII gene] (Hominidae): **atherosclerosis** candidate gene, splice-site **mutation**; human APOB gene [human apolipoprotein-B gene] (Hominidae): **atherosclerosis** candidate gene, splice-site **mutation**; human APOCII gene [human apolipoprotein-CII gene] (Hominidae): **atherosclerosis** candidate gene, splice-site **mutation**; human APOE gene [human apolipoprotein-E gene] (Hominidae): **atherosclerosis** candidate gene, splice-site **mutation**; human CBS gene [human cystathione beta-synthase gene] (Hominidae): **atherosclerosis** candidate gene, splice-site **mutation**; human CETP gene [human cholesteryl ester transfer protein gene] (Hominidae): **atherosclerosis** candidate gene, splice-site **mutation**; human LCAT gene [human lecithin cholesterol

transferase gene] (Hominidae): **atherosclerosis** candidate gene, splice-site **mutation**; human LDLR gene [human low density lipoprotein receptor gene] (Hominidae): **atherosclerosis** candidate gene, splice-site **mutation**; human LIPA gene [human **lysosomal acid lipase** A gene] (Hominidae): **atherosclerosis** candidate gene, splice-site **mutation**; human LPL gene [human lipoprotein lipase gene] (Hominidae): **atherosclerosis** candidate gene, splice-site **mutation**

IT Alternate Indexing
Atherosclerosis (MeSH)

IT Miscellaneous Descriptors
mRNA splicing [messenger RNA splicing]: information theory-based model, **mutational** severity

ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
human (Hominidae)

ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Primates; Vertebrates

RN 20910-06-9D (CHOLESTERYL)
9001-62-1 (LIPASE)
9004-02-8 (LIPOPROTEIN LIPASE)

L24 ANSWER 4 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS

AN 1998:95468 BIOSIS

DN PREV199800095468

TI Clinical, biochemical and histological analysis of seven patients with **cholesteryl ester storage disease**.

AU Tylki-Szymanska, Anna (1); Rujner, Jolanta; Lugowska, Agnieszka; Sawnor-Korszynska, Danuta; Wozniewicz, Bogdan; Czarnowska, Elzbieta

CS (1) Dep. Metab. Dis., Child. Memorial Health Inst., Al. Dzieci Polskich 20, 04-736 Warsaw Poland

SO Acta Paediatrica Japonica, (Dec., 1997) Vol. 39, No. 6, pp. 643-646. ISSN: 0374-5600.

DT Article

LA English

AB **Lysosomal acid lipase** (LAL) deficiency leads to two phenotypically different diseases: **cholesteryl ester storage disease** (CESD) and **Wolman**'s disease. **Lysosomal acid lipase** hydrolyzes cholesteryl esters and triglycerides. Deficiency of LAL results in intralysosomal storage of cholesteryl esters and triglycerides. CESD has a chronic and benign course and is characterized by hepatomegaly and mild hypercholesterolemia. It leads to fibrosis (cirrhosis) and early **atherosclerosis**. This report presents the clinical, biochemical and microscopic data of seven patients with CESD followed up over 10 years. The physical development of all the study children remained within the normal range; 7 patients had hepatomegaly and 6 also had splenomegaly. Three patients had normal cholesterol, triglycerides and transaminases values; the other four had slightly elevated levels for these parameters. The activity of LAL in all patients was reduced to below 30% of the lower normal value. Histologically, cholesteryl crystals and lipid storage vacuoles in Kupffer cells were present in all examined patients except one. Accumulation of cholesteryl esters was visible on thin-layer chromatography of lipid extracts obtained from liver biopsies.

IT Major Concepts
Metabolism

IT Diseases
cholesteryl ester storage disease
: metabolic disease

IT Chemicals & Biochemicals
cholesterol; cholesteryl esters; **lysosomal acid**

lipase; transaminases; triglycerides
IT Miscellaneous Descriptors
biochemical analysis; clinical analysis; histological analysis
ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
human (Hominidae): child
ORGN Organism Superterms
Animals; Chordates; Humans; Mammals; Primates; Vertebrates
RN 20910-06-9D (CHOLESTERYL)
57-88-5 (CHOLESTEROL)
9031-66-7D (TRANSAMINASES)

L24 ANSWER 5 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1997:96028 BIOSIS
DN PREV199799395231
TI Importance of defined **mutations** in the LAL gene for the manifestation of CESD and WD and characterization of the LAL promoter.
AU Aslanidis, C.; Ries, S.; Buechler, C.; Fehringer, P.; Schmitz, G.
CS Inst. Clin. Chem. Lab. Med., Univ. Regensburg, 93042 Regensburg Germany
SO Molecular Biology of the Cell, (1996) Vol. 7, No. SUPPL., pp. 296A.
Meeting Info.: Annual Meeting of the 6th International Congress on Cell Biology and the 36th American Society for Cell Biology San Francisco, California, USA December 7-11, 1996
ISSN: 1059-1524.
DT Conference; Abstract; Conference
LA English
IT Major Concepts
Biochemistry and Molecular Biophysics; Cardiovascular Medicine (Human Medicine, Medical Sciences); Cardiovascular System (Transport and Circulation); Cell Biology; Dermatology (Human Medicine, Medical Sciences); Development; Enzymology (Biochemistry and Molecular Biophysics); Genetics; Integumentary System (Chemical Coordination and Homeostasis); Metabolism; Molecular Genetics (Biochemistry and Molecular Biophysics)
IT Chemicals & Biochemicals
LIPASE; CHOLESTERYL
IT Miscellaneous Descriptors
ACCUMULATION; ANALYTICAL METHOD; AP2; AUTOSOMAL RECESSIVE DISORDER; CELL BIOLOGY; CELL CULTURE; CESD; **CHOLESTERYL ESTER STORAGE DISEASE**; CHOLESTERYL ESTERS; ENZYMOLOGY; EXPRESSION; GENE STRUCTURE; GENETIC DISEASE; LAL GENE; LAL GENE MRNA; LAL PROMOTER; **LYSOSOMAL ACID LIPASE** GENE; **LYSOSOMAL ACID LIPASE** MESSENGER RNA; **LYSOSOMAL ACID LIPASE** MRNA; **LYSOSOMAL ACID LIPASE** PROMOTER; METABOLIC DISEASE; MOLECULAR GENETICS; **MUTATIONS**; PATIENT; PREMATURE **ATHEROSCLEROSIS**; SP1; TRANSCRIPTION FACTOR; TRANSCRIPTION START SITE; TRIGLYCERIDES; VASCULAR DISEASE; WD; **WOLMAN** DISEASE
ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
human (Hominidae)
ORGN Organism Superterms
animals; chordates; humans; mammals; primates; vertebrates
RN 9001-62-1 (LIPASE)
20910-06-9D (CHOLESTERYL)

L24 ANSWER 6 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1995:477340 BIOSIS
DN PREV199598491640
TI Two polymorphic forms of human **lysosomal acid lipase** have different level of activity.

AU Du, Hong; Sheriff, Sulaiman
CS Div. Human Genetics, Child. Hosp. Res. Found., Cincinnati, OH USA
SO American Journal of Human Genetics, (1995) Vol. 57, No. 4 SUPPL., pp. A178.
Meeting Info.: 45th Annual Meeting of the American Society of Human Genetics Minneapolis, Minnesota, USA October 24-28, 1995
ISSN: 0002-9297.
DT Conference
LA English
IT Major Concepts
Cardiovascular Medicine (Human Medicine, Medical Sciences); Development; Enzymology (Biochemistry and Molecular Biophysics); Genetics; Metabolism
IT Chemicals & Biochemicals
LIPASE; CHOLESTERYL
IT Miscellaneous Descriptors
ATHEROSCLEROSIS; CHOLESTERYL ESTER STORAGE DISEASE; DELETION; HYPERLIPIDEMIA; INSERTION; MEETING ABSTRACT; MEETING POSTER; POINT **MUTATION**; **WOLMAN** DISEASE
ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
Hominidae (Hominidae)
ORGN Organism Superterms
animals; chordates; humans; mammals; primates; vertebrates
RN 9001-62-1 (LIPASE)
20910-06-9D (CHOLESTERYL)

L24 ANSWER 7 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1995:347392 BIOSIS
DN PREV199598361692
TI A novel variant of **lysosomal acid lipase** (Leu-336 fwdarw Pro) associated with acid lipase deficiency and **cholesterol ester storage disease.**
AU Seedorf, Udo (1); Wiebusch, Heiko; Muntoni, Sandro; Christensen, Niels C.; Skovby, Flemming; Nickel, Volker; Roskos, Martin; Funke, Harald; Ose, Leiv; Assmann, Gerd
CS (1) Inst. Arteriosklerosforschung Univ. Muenster, Domagkstr 3, 48149 Muenster Germany
SO Arteriosclerosis Thrombosis and Vascular Biology, (1995) Vol. 15, No. 6, pp. 773-778.
ISSN: 1079-5642.
DT Article
LA English
AB **Cholesterol ester storage disease** (CESD) is associated with premature **atherosclerosis**, hepatomegaly, elevated LDL cholesterol levels, and in most cases, low HDL cholesterol levels. Previous studies have shown a G fwdarw A **mutation** at the 3' splice junction of exon 8 (E8SJM) of the gene encoding **lysosomal acid lipase** (LAL) in two kindreds with CESD. In a Canadian-Norwegian kindred with this disease, we show this **mutation** in conjunction with an as yet unknown T fwdarw C transition in exon 10 predicting a Leu-336 fwdarw Pro (L336P) replacement and an A fwdarw C transversion in exon 2 predicting a T-6P replacement in the prepeptide. Identification of the L336P rather than the T-6P replacement as the second defect underlying CESD in our patient is deduced from three lines of evidence. First, the E8SJM allele is located in cis with the **mutation** predicting the T-6P-encoding allele but in trans with the L336P-encoding allele; second, the L336P but not the T-6P replacement cosegregates with low LAL activity in the family; third, the T-6P replacement was found in 6 of 28 alleles from subjects with normal **lysosomal acid lipase** activity,

suggesting that this variant represents a frequent nonfunctional polymorphism. Since the residual LAL activity is higher and the clinical phenotype based on plasma tipid values and severity of hepatosplenomegaly is milder in this case than in a previously studied case who was homozygous for the E8SJM allele, we conclude that the L336P variant appears to be associated with a phenotypically mild form of CESD.

IT Major Concepts
Enzymology (Biochemistry and Molecular Biophysics); Gastroenterology (Human Medicine, Medical Sciences); Genetics; Metabolism

IT Chemicals & Biochemicals
LIPASE; CHOLESTEROL

IT Miscellaneous Descriptors
ATHEROSCLEROSIS; GENETICS; LIVER DISEASE; LYSOSOMAL STORAGE DISEASE; PHENOTYPE

ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
human (Hominidae)

ORGN Organism Superterms
animals; chordates; humans; mammals; primates; vertebrates

RN 9001-62-1 (LIPASE)
57-88-5D (CHOLESTEROL)

L24 ANSWER 8 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS

AN 1995:61003 BIOSIS

DN PREV199598075303

TI End-Stage Renal Disease in a Patient with **Cholesteryl Ester Storage Disease** following Successful Liver Transplantation and Cyclosporine Immunosuppression.

AU Kale, S. Arundhati (1); Ferry, George D.; Hawkins, Edith P.

CS (1) Renal Section, Texas Children's Hosp., Houston, TX 77030 USA

SO Journal of Pediatric Gastroenterology and Nutrition, (1995) Vol. 20, No. 1, pp. 95-97.
ISSN: 0277-2116.

DT Article

LA English

IT Major Concepts
Cardiovascular Medicine (Human Medicine, Medical Sciences); Enzymology (Biochemistry and Molecular Biophysics); Gastroenterology (Human Medicine, Medical Sciences); Metabolism; Nutrition; Pharmacology; Physiology; Surgery (Medical Sciences); Urology (Human Medicine, Medical Sciences)

IT Chemicals & Biochemicals
CHOLESTERYL; CYCLOSPORINE; LIPASE

IT Miscellaneous Descriptors
ATHEROSCLEROSIS; CASE STUDY; CYCLOSPORINE; HYPERTENSION; IMMUNOSUPPRESSANT-DRUG; **LYSOSOMAL ACID LIPASE** DEFICIENCY; METABOLIC DISORDER

ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
Hominidae (Hominidae)

ORGN Organism Superterms
animals; chordates; humans; mammals; primates; vertebrates

RN 20910-06-9D (CHOLESTERYL)
59865-13-3Q (CYCLOSPORINE)
63798-73-2Q (CYCLOSPORINE)
9001-62-1 (LIPASE)

L24 ANSWER 9 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS

AN 1995:13655 BIOSIS

DN PREV199598027955

TI Molecular characterization of the underlying defects in two patients with

cholesteryl ester storage disease.
AU Seedorf, U. (1); Skovby, F.; Nickel, V. (1); Christensen, N. C.; Roskoss, M. (1); Brysch, P. (1); Ros, E.; Ose, L.; Assmann, G. (1)
CS (1) Inst. Arteriosklerosеforschung, Muenster Germany
SO European Heart Journal, (1994) Vol. 15, No. ABSTR. SUPPL., pp. 419.
Meeting Info.: Joint XIIth World Congress of Cardiology and the XVIth Congress of the European Society of Cardiology Berlin, Germany September 10-14, 1994
ISSN: 0195-668X.
DT Conference
LA English
IT Major Concepts
Cardiovascular Medicine (Human Medicine, Medical Sciences); Enzymology (Biochemistry and Molecular Biophysics); Genetics; Metabolism
IT Chemicals & Biochemicals
CHOLESTERYL; LIPASE
IT Miscellaneous Descriptors
ATHEROSCLEROSIS; HYPERCHOLESTEROLEMIA; **LYSOSOMAL ACID LIPASE**; MEETING ABSTRACT; MEETING POSTER; **WOLMAN** DISEASE
ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
human (Hominidae)
ORGN Organism Superterms
animals; chordates; humans; mammals; primates; vertebrates
RN 20910-06-9D (CHOLESTERYL)
9001-62-1 (LIPASE)

L24 ANSWER 10 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1993:288217 BIOSIS
DN PREV199345006342
TI Purification and characterization of human hepatic **lysosomal acid lipase.**
AU Ameis, Detlev (1); Merkel, Martin; Eckerskorn, Christoph; Greten, Heiner
CS (1) Dep. Med., Univ. Hamburg, Hamburg French Guiana
SO Circulation, (1992) Vol. 86, No. 4 SUPPL. 1, pp. I548.
Meeting Info.: 65th Scientific Sessions of the American Heart Association New Orleans, Louisiana, USA November 16-19, 1992
ISSN: 0009-7322.
DT Conference
LA English
IT Major Concepts
Cardiovascular Medicine (Human Medicine, Medical Sciences); Development; Enzymology (Biochemistry and Molecular Biophysics); Gastroenterology (Human Medicine, Medical Sciences); Genetics; Metabolism
IT Chemicals & Biochemicals
LIPASE; CHOLESTEROL
IT Miscellaneous Descriptors
ABSTRACT; **ATHEROSCLEROSIS**; **CHOLESTEROL ESTER STORAGE DISEASE**; LIPID METABOLISM; **WOLMAN** DISEASE
ORGN Super Taxa
Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGN Organism Name
Hominidae (Hominidae)
ORGN Organism Superterms
animals; chordates; humans; mammals; primates; vertebrates
RN 9001-62-1 (LIPASE)
57-88-5D (CHOLESTEROL)

L24 ANSWER 11 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS

AN 1992:29287 BIOSIS
DN BA93:18562
TI DESCRIPTION OF A CASE OF **CHOLESTERYL ESTER STORAGE DISEASE** WITH PREMATURE **ATHEROSCLEROSIS**
.
AU CUCHEL M; GIUDICI G A; PEROTTI M E; LONGI R; VERGANI C
CS ISTITUTO DI MEDICINA INTERNA UNIVERSITA DEGLI STUDI DI MILANO VIA PACE 9, 20122 MILANO, ITALY.
SO G ARTERIOSCLER, (1991) 16 (2), 97-102.
CODEN: GIARA5. ISSN: 0017-0224.
FS BA; OLD
LA Italian
AB The lysosomal theory of **atherosclerosis** suggests that altered lysosomal function might contribute to atherogenesis. Postmortem evidence of premature **atherosclerosis** in subjects with cholesteryl ester shortage disease (CESD) support this theory. CESD is an inherited disease characterized by a defect of **lysosomal acid lipase** activity. We describe a 16-year old subject with clinical, laboratory, histochemical and ultrastructural data compatible with the diagnosis of CESD. In this subject B-mode ultrasound imaging identified an early atheromatous lesion in the left common carotid artery. This finding provides further support for the lysosomal theory of **atherosclerosis**. Published studies suggest that reduced **lysosomal acid lipase** activity may represent an independent risk factor for premature development of **atherosclerosis**.
IT Miscellaneous Descriptors
HUMAN ADOLESCENT CAROTID ARTERY LESION LYSOSOMAL THEORY **LYSOSOMAL ACID LIPASE** ACTIVITY DIAGNOSIS HISTOCHEMISTRY
RN 9001-62-1 (LIPASE)
20910-06-9D (CHOLESTERYL)

L24 ANSWER 12 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1991:466674 BIOSIS
DN BR41:92434
TI TREATMENT OF **CHOLESTERYL ESTER STORAGE DISEASE** WITH COMBINED CHOLESTYRAMINE WITH LOVASTATIN.
AU MCCOY E; YOKOYAMA S
CS DEP. PEDIATRICS, FAC. MED., UNIV. ALBERTA, EDMONTON, ALBERTA, CAN.
SO WILLIAMS, C. L. AND E. L. WYNDER (ED.). ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, VOL. 623. HYPERLIPIDEMIA IN CHILDHOOD AND THE DEVELOPMENT OF ATHEROSCLEROSIS; MEETING, BETHESDA, MARYLAND, USA, MAY 2-4, 1990. X+482P. NEW YORK ACADEMY OF SCIENCES: NEW YORK, NEW YORK, USA. ILLUS. (1991) 0 (0), 453-454.
CODEN: ANYAA9. ISSN: 0077-8923. ISBN: 0-89766-658-5 (PAPER), 0-89766-657-7 (CLOTH).
DT Conference
FS BR; OLD
LA English
IT Miscellaneous Descriptors
HUMAN METABOLIC-DRUG GENETIC DISORDER **LYSOSOMAL ACID LIPASE** DEFICIENCY **ATHEROSCLEROSIS** HYPERLIPIDEMIA
RN 9001-62-1 (LIPASE)
11041-12-6 (CHOLESTYRAMINE)
20910-06-9D (CHOLESTERYL)
75330-75-5 (LOVASTATIN)

L24 ANSWER 13 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1990:519069 BIOSIS
DN BA90:136345
TI GENETIC LIPID STORAGE DISEASE WITH **LYSOSOMAL ACID LIPASE** DEFICIENCY IN RATS.

AU YOSHIDA H; KURIYAMA M
CS DEP. PATHOL., FAC. MED., KAGOSHIMA UNIV., KAGOSHIMA 890, JPN.
SO LAB ANIM SCI, (1990) 40 (5), 486-489.
CODEN: LBASAE. ISSN: 0023-6764.
FS BA; OLD
LA English
AB We describe a new animal model of a genetic lipid storage disease analogous to human **Wolman**'s disease. Affected Donryu rats, who inherited the disease in an autosomal recessive mode, manifested marked hepatosplenomegaly, lymph node enlargement, and thickened, dilated intestine. Morphologically, many characteristic foam cells were observed in livers and spleens. No adrenal calcification could be found in affected rats. Biochemical studies on spleen and liver tissues showed massive accumulation of esterified cholesterol and triglycerides, and deficiency of acid lipase for [14C]-cholesteryl oleate. This animal model could contribute greatly to the clarification of the physiological and pathological roles of **lysosomal acid lipase** in the metabolism of lipoproteins and cholesterol, and of the pathogenesis of therosclerosis.
IT Miscellaneous Descriptors
NEW ANIMAL MODEL HUMAN **WOLMAN**'S DISEASE AUTOSOMAL RECESSIVE INHERITANCE HEPATOSPLENOMEGALY LYMPH NODE ENLARGEMENT DILATED INTESTINE CHOLESTEROL TRIGLYCERIDES **ATHEROSCLEROSIS**
RN 57-88-5 (CHOLESTEROL)
9001-62-1 (LIPASE)

L24 ANSWER 14 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1989:85564 BIOSIS
DN BR36:41655
TI **CHOLESTERYL ESTER STORAGE DISEASE** RISK FACTORS FOR **ATHEROSCLEROSIS** IN A 15-YEAR-OLD BOY.
AU LONGHI R; VERGANI C; VALSASINA R; RIVA E; GALLUZZO C; AGOSTONI C; GIOVANNINI M
CS 5TH DEP. PEDIATRICS, INST. BIOMEDICAL SCI. 'OSPEDALE S. PAOLO', UNIV. MILAN, ITALY.
SO ANNUAL MEETING OF THE SOCIETY FOR THE STUDY OF INBORN ERRORS OF METABOLISM, SHEFFIELD, ENGLAND, UK, SEPTEMBER 22-25, 1987. J INHERITED METAB DIS. (1988) 11 (SUPPL 2), 143-145.
CODEN: JIMDDP. ISSN: 0141-8955.
FS BR; OLD
LA English
IT Miscellaneous Descriptors
HUMAN CASE STUDY AUTOSOMAL RECESSIVE DISORDER **ATHEROSCLEROTIC** RISK **LYSOSOMAL ACID LIPASE** HYDROXYMETHYLGLUTARYL COENZYME A REDUCTASE SERUM CHOLESTEROL TRIGLYCERIDE HIGH-DENSITY LIPOPROTEINS
RN 57-88-5 (CHOLESTEROL)
9001-62-1 (LIPASE)
20910-06-9D (CHOLESTERYL)
9028-35-7Q, 37250-24-1Q (HYDROXYMETHYLGLUTARYL COENZYME A REDUCTASE)

L24 ANSWER 15 OF 15 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1987:41848 BIOSIS
DN BA83:21194
TI GENETIC VARIATION OF HUMAN MONONUCLEAR LEUKOCYTE **LYSOSOMAL ACID LIPASE** ACTIVITY RELATIONSHIP TO **ATHEROSCLEROSIS**.
AU COATES P M; LANGER T; CORTNER J A
CS LIPID-HEART RESEARCH CENTER, CHILDREN'S HOSPITAL PHILADELPHIA, DEP. PEDIATRICS, UNIV. PENNSYLVANIA SCH. MED., PHILADELPHIA, PA 19104, USA.
SO ATHEROSCLEROSIS, (1986) 62 (1), 11-20.
CODEN: ATHSBL. ISSN: 0021-9150.
FS BA; OLD

LA English

AB **Lysosomal acid lipase** activity was measured in mononuclear leukocytes of patients selected on the basis of premature cardiovascular disease, with or without hyperlipidemia. Enzyme activity was significantly lower in the patient population (4.8 .+-. 1.3 nmol/min/mg protein, n = 190 males) than in an age-matched control population (5.4 .+-. 1.3 nmol/min/mg protein, n = 124 males). There was no effect of hypercholesterolemia or hypertriglyceridemia on the enzyme activity. In the group of patients with normal plasma lipids (n = 77), 18% had mononuclear leukocyte acid lipase activity which fell below the control population 5th percentile, and in the range of enzyme activity observed in cells from obligate heterozygotes for inherited acid lipase deficiency (**Wolman** disease and **cholesteryl ester storage disease**). Studies of acid lipase activity in families of our patients provided evidence that an autosomal **mutation** is associated with (or responsible for) this reduced enzymatic activity and may represent an independent risk factor for the premature development of **atherosclerosis**.

IT Miscellaneous Descriptors
WOLMAN DISEASE **CHOLESTERYL ESTER STORAGE DISEASE** AUTOSOMAL **MUTATION**

RN 9001-62-1 (LIPASE)
20910-06-9D (CHOLESTERYL)

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=> fil medlins
'MEDLINS' IS NOT A VALID FILE NAME
SESSION CONTINUES IN FILE 'MEDLINE'

=> fil medline
FILE 'MEDLINE' ENTERED AT 12:42:28 ON 18 OCT 2001

 FILE LAST UPDATED: 17 OCT 2001 (20011017/UP).  FILE COVERS 1958 TO DATE.

 On April 22, 2001, MEDLINE was reloaded.  See HELP RLOAD for details.

 MEDLINE now contains IN-PROCESS records.  See HELP CONTENT for details.

 MEDLINE is now updated 4 times per week.  A new current-awareness alert
 frequency (EVERYUPDATE) is available.  See HELP UPDATE for more information.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2001 vocabulary.  Enter HELP THESAURUS for details.

 The OLDMEDLINE file segment now contains data from 1958 through 1965.
 Enter HELP CONTENT for details.

 Left, right, and simultaneous left and right truncation are available in the
 Basic Index.  See HELP SFIELDS for details.

 THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE
 SUBSTANCE IDENTIFICATION.

=> d his


     (FILE 'BIOSIS' ENTERED AT 12:27:16 ON 18 OCT 2001)
               DEL HIS Y

     FILE 'MEDLINE' ENTERED AT 12:28:22 ON 18 OCT 2001

     FILE 'REGISTRY' ENTERED AT 12:28:26 ON 18 OCT 2001
                 E LYSOSOMAL ACID LIPASE/CN
L1             1 S E3

     FILE 'MEDLINE' ENTERED AT 12:28:37 ON 18 OCT 2001
L2             0 S L1
                 E LYSOSOMAL ACID LIPASE
L3           118 S LYSOSOMAL ACID LIPASE
L4          1291 S ESTERASE (2A) CHOLESTEROL? OR CHOLESTERASE# OR CHOLESTERIN ES
L5           150 S LYSOSOMAL ACID LIPASE# OR STEROL (W) (ESTER HYDROLASE# OR EST
L6          1396 S L4 OR L5
                 E ATHEROSCLEROSIS/CT
                 E E3+ALL
                 E E2+ALL
L7             0 S ARTHERIOSCLEROSIS+NT/CT
L8         56249 S ARTERIOSCLEROSIS+NT/CT
L9            84 S L8 AND L6
L10       145693 S PLASMID# OR VECTOR?
L11            0 S L9 AND L10
L12            0 S MANNOSE AND L9
L13        17548 S ARTERIOSCLEROSIS+NT/CT (L) TH./CT
L14           15 S L9 AND L13
                 E ANTIARTERIOSCLERO/CT
                 E ANTIARTERIOSCLER?
                 E ANTIARTHERIOSCLER?
L15           29 S ANTIARTERIOS?
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                E ANTILIPEMIC AGENTS/CT
                E E3+ALL
L16         4818 S ANTILIPEMIC AGENTS/CT OR ANTICHLOESTEREMIC AGENTS/CT
L17        10043 S L16 OR ANTICHOLESTEREMIC AGENTS/CT
L18            5 S L17 AND L9
L19           16 S L14 OR L18
L20         7976 S DRUG DELIVER?
L21            0 S L9 AND L20
L22       165186 S DELIVER?
L23            0 S L9 AND L21
L24            0 S ACETYGLYCOSYLAT? AND L9
                E WOLMAN /CT
                E E5+ALL
L25           85 S WOLMAN DISEASE/CT
L26           65 S CHOLESTEROL ESTER STORAGE DISEASE+NT/CT
L27          132 S L25 OR L26
L28            2 S L27 AND L9
L29           17 S L19 OR L28

     FILE 'MEDLINE' ENTERED AT 12:42:28 ON 18 OCT 2001

=> d .med 1-17

L29  ANSWER 1 OF 17     MEDLINE
AN   2001295567     MEDLINE
DN   21273916   PubMed ID: 11380065
TI   Long-term administration of the HMG-CoA reductase inhibitor lovastatin in
     two patients with cholesteryl ester storage disease.
AU   Rassoul F; Richter V; Lohse P; Naumann A; Purschwitz K; Keller E
CS   Department of Clinical Chemistry and Pathobiochemistry, University
     Leipzig/Working Group Health Promotion and Prevention of Atherosclerosis
     (AGA), Germany.. rassf@medizin.uni-leipzig.de
SO   INTERNATIONAL JOURNAL OF CLINICAL PHARMACOLOGY AND THERAPEUTICS, (2001
     May) 39 (5) 199-204.
     Journal code: B0D; 9423309. ISSN: 0946-1965.
CY   Germany: Germany, Federal Republic of
DT   (CLINICAL TRIAL)
     Journal; Article; (JOURNAL ARTICLE)
LA   English
FS   Priority Journals
EM   200110
ED   Entered STN: 20011008
     Last Updated on STN: 20011008
     Entered Medline: 20011004
AB   OBJECTIVE: In order to suppress de novo cholesterol and VLDL biosynthesis,
     a long-term therapy trial with lovastatin, a competitive inhibitor of
     3-hydroxy-3-methylglutaryl-coenzyme A (HMG-CoA) reductase, was initiated
     in two patients with cholesteryl ester storage disease (CESD), and
     concentrations of plasma lipids were monitored over a period of 9 years.
     METHODS: We studied two male patients with enzymatically confirmed CESD in
     whom long-term lovastatin therapy (8 and 9 years) was begun at the age of
     7 and 19 years. The diagnosis of CESD was confirmed by the measurement of
     human lysosomal acid lipase (hLAL) activity
     in cultured skin fibroblasts and leukocytes. Restriction fragment length
     polymorphism (RFLP) analysis revealed that both subjects are homozygotes
     for the common CESD splice site mutation. Levels of serum lipids and
     lipoproteins were measured yearly. RESULTS: During the first year, total
     serum cholesterol decreased from 317 to 201 mg/dl in Patient A and from
     228 to 120 mg/dl in Patient B, due mainly to the reduction of low-density
     lipoprotein (LDL) cholesterol from 262 to 151 mg/dt in Patient A and from
     166 to 66 mg/dl in Patient B. Accordingly, the LDL cholesterol : high
     density lipoprotein (HDL) cholesterol ratio was markedly reduced in both
     patients after one year of therapy. The treatment was continued and, after
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9 years of further medication, low total cholesterol and LDL cholesterol levels were still maintained. CONCLUSIONS: The study demonstrates that HMG-CoA reductase inhibitors are well tolerated drugs during long-term treatment of CESD patients and may help to prevent the development of premature atherosclerosis.

CT Check Tags: Human; Male
Adult
Arteriosclerosis: PC, prevention & control
Child
*Cholesterol: BL, blood
Cholesterol Ester Storage Disease: BL, blood
***Cholesterol Ester Storage Disease: DT, drug therapy**
Cholesterol Ester Storage Disease: GE, genetics
Drug Administration Schedule
*Hydroxymethylglutaryl-CoA Reductase Inhibitors: TO, toxicity
Longitudinal Studies
Polymorphism, Restriction Fragment Length
*Triglycerides: BL, blood

L29 ANSWER 2 OF 17 MEDLINE
AN 2000197673 MEDLINE
DN 20197673 PubMed ID: 10735626
TI Subclinical course of cholesteryl ester storage disease in an adult with hypercholesterolemia, accelerated atherosclerosis, and liver cancer.
AU Elleder M; Chlumska A; Hyanek J; Poupetova H; Ledvinova J; Maas S; Lohse P
CS Institute of Inherited Metabolic Disorders, Charles University Prague, 1st Faculty of Medicine and General Faculty Hospital, Praha, Czech Republic.. melleder@beba.cesnet.cz
SO JOURNAL OF HEPATOLOGY, (2000 Mar) 32 (3) 528-34.
Journal code: IBS; 8503886. ISSN: 0168-8278.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200004
ED Entered STN: 20000421
Last Updated on STN: 20000421
Entered Medline: 20000412
AB Few cases of asymptomatic cholesteryl ester storage disease (CESD) due to low enzymatic activity of human **lysosomal acid lipase/cholesteryl ester hydrolase** (hLAL) have been reported thus far in adults Here, we describe a 51-year-old man with a long clinical history of mixed hyperlipoproteinemia and severe premature atherosclerosis, but with no signs of hepatomegaly, liver dysfunction, or splenomegaly. The disease was discovered by chance in a biopsy performed because of suspected liver cancer (proven to be a cholangiocarcinoma). Residual hLAL activity in peripheral leukocytes was determined to be 6% of control values. DNA sequence and restriction fragment length polymorphism analysis demonstrated that the patient was a compound heterozygote for the prevalent CESD exon 8 splice site mutation (G934A) and the deletion of a C (nucleotide 673, 674, or 675) in exon 6 of the hLAL gene, resulting in premature termination of protein translation at residue 195. The patient died of liver failure as a consequence of extensive tumor infiltration at age 52. Lipid analysis revealed moderate cholesteryl ester storage in the liver and in the suprarenal cortex, and massive accumulation in the testicular histiocytes and Leydig cells, resulting in a pronounced secondary atrophy of the seminiferous tubules. Our case study demonstrates that hepatomegaly is an inconstant feature, even in CESD patients compound heterozygous for a Wolman mutation which results in complete loss of hLAL enzymic activity. It also highlights the need to be aware of this condition as it may be underdiagnosed.
CT Check Tags: Case Report; Human; Male; Support, Non-U.S. Gov't
Adult

***Arteriosclerosis: CO, complications**
Base Sequence: GE, genetics
***Cholesterol Ester Storage Disease: CO, complications**
Cholesterol Ester Storage Disease: GE, genetics
***Cholesterol Ester Storage Disease: PP, physiopathology**
DNA: GE, genetics
*Hypercholesterolemia: CO, complications
Liver: ME, metabolism
Liver: PA, pathology
*Liver Neoplasms: CO, complications
Pedigree
Polymorphism, Restriction Fragment Length

L29 ANSWER 3 OF 17 MEDLINE
AN 97417030 MEDLINE
DN 97417030 PubMed ID: 9270979
TI Effect of trifluoperazine on certain arterial wall lipid-metabolizing enzymes inducing atherosclerosis in rhesus monkeys.
AU Mohindroo A; Ahluwalia P
CS Department of Biochemistry, Panjab University, Chandigarh, India.
SO LIPIDS, (1997 Aug) 32 (8) 867-72.
Journal code: L73; 0060450. ISSN: 0024-4201.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199710
ED Entered STN: 19971024
Last Updated on STN: 19980206
Entered Medline: 19971014
AB The effect of trifluoperazine (TFP) was investigated on arterial wall lipid-metabolizing enzymes like acyl-CoA:cholesterol acyltransferase (ACAT) and **cholesterol ester hydrolase** (CEH) in rhesus monkeys. The activity was determined in aortic wall homogenates obtained from rhesus monkeys fed an atherogenic diet coupled with intramuscular injections of adrenaline and TFP. Although TFP had no significant effect on serum cholesterol and triglycerides, it decreased significantly the formation of atherosclerotic lesions by decreasing the esterification of cholesterol, by inhibiting ACAT and enhancing its utilization by activating CEH. Hence, the preventive effect of TFP on the development of atherosclerosis in rhesus monkeys is mediated through its ability to influence the activities of arterial wall lipid-metabolizing enzymes like ACAT and CEH.
CT Check Tags: Animal; Male
Aorta: DE, drug effects
*Aorta: EN, enzymology
Aorta: ME, metabolism
Arteriosclerosis: ET, etiology
***Arteriosclerosis: PC, prevention & control**
Blood Pressure: DE, drug effects
Cholesterol: BL, blood
***Cholesterol Esterase: ME, metabolism**
Cholesterol Esters: ME, metabolism
Diet, Atherogenic
Epinephrine: PD, pharmacology
Hypercholesterolemia: EN, enzymology
*Lipids: ME, metabolism
Lipoproteins: BL, blood
Macaca mulatta
Muscle, Smooth, Vascular: DE, drug effects
Muscle, Smooth, Vascular: EN, enzymology
*Sterol O-Acyltransferase: AI, antagonists & inhibitors
*Trifluoperazine: PD, pharmacology

Trifluoperazine: TU, therapeutic use
Triglycerides: BL, blood

L29 ANSWER 4 OF 17 MEDLINE
AN 97043963 MEDLINE
DN 97043963 PubMed ID: 8889034
TI Anti-hyperlipidemic and anti-atherosclerotic actions of shosaikoto (kampo medicine).
AU Shen Y R; Inoue M; Nagatsu Y; Ogihara Y; Aburada M
CS Department of Pharmacognosy, Faculty of Pharmaceutical Sciences, Nagoya City University, Japan.
SO BIOLOGICAL AND PHARMACEUTICAL BULLETIN, (1996 Sep) 19 (9) 1160-5. Journal code: BPZ; 9311984. ISSN: 0918-6158.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199702
ED Entered STN: 19970306
Last Updated on STN: 19980206
Entered Medline: 19970224
AB We investigated the anti-atherosclerotic action shown by Shosaikoto, a Kampo medicine, using hypercholesterolemic mice. Oral administration of Shosaikoto significantly suppressed the elevation of serum cholesterol in C57BL/6 mice fed a 1.25% cholesterol-enriched diet for four weeks and improved the T cell ratio in peripheral blood, which decreased with the increase of the serum cholesterol level. In addition, Shosaikoto reduced the accumulation of cholesteryl oleate, which alters macrophages into foam cells, after the treatment of macrophages with oxidized or acetylated low density lipoprotein (LDL). Enzymatic study revealed that the treatment of macrophages with oxidized LDL enhanced acyl-coenzyme A: cholesterol acyltransferase (ACAT) activity and markedly reduced neutral **cholesteryl ester hydrolase** (NCEase) activity.
Shosaikoto treatment prevented a decrease in the NCEase activity, however due to the oxidized LDL treatment, although it slightly augmented ACAT activity. Thus, Shosaikoto, which is known to modulate the immune system, improves macrophage and lymphocyte functions diminished by hypercholesterolemia, resulting in an anti-atherosclerotic action.
CT Check Tags: Animal; Male
***Anticholesteremic Agents: PD, pharmacology**
Anticholesteremic Agents: TU, therapeutic use
***Antilipemic Agents: PD, pharmacology**
***Arteriosclerosis: DT, drug therapy**
Cholesterol Esterase: ME, metabolism
Cholesterol Esters: BL, blood
Cholesterol Esters: ME, metabolism
*Drugs, Chinese Herbal: PD, pharmacology
Drugs, Chinese Herbal: TU, therapeutic use
Flow Cytometry
Fluorescent Antibody Technique, Indirect
Lipoproteins, HDL: BL, blood
Lipoproteins, LDL: BL, blood
Macrophages, Peritoneal: DE, drug effects
Macrophages, Peritoneal: EN, enzymology
Macrophages, Peritoneal: ME, metabolism
Mice
Mice, Inbred C57BL
Sterol O-Acyltransferase: BL, blood

L29 ANSWER 5 OF 17 MEDLINE
AN 95067601 MEDLINE
DN 95067601 PubMed ID: 7977012
TI Calcium channel blockers and coronary atherosclerosis: from the rabbit to

the real world.
AU Waters D; Lesperance J
CS Division of Cardiology, Hartford Hospital, CT 06102-5037.
SO AMERICAN HEART JOURNAL, (1994 Dec) 128 (6 Pt 2) 1309-16. Ref: 48
Journal code: 3BW; 0370465. ISSN: 0002-8703.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199412
ED Entered STN: 19950110
Last Updated on STN: 19950110
Entered Medline: 19941227
AB Many calcium channel blockers have been shown to retard the development of atherosclerosis in cholesterol-fed rabbits. The mechanisms that may contribute to this effect include stimulation of **cholesteryl ester hydrolase** activity in smooth muscle cells, amelioration of hypercholesterolemic-induced endothelial dysfunction, or inhibition of smooth muscle cell proliferation and migration. The effect of calcium channel blockers on the evolution of coronary atherosclerosis in humans has been assessed in three clinical trials. In the Montreal Heart Institute trial, nicardipine did not influence the overall rate of progression and regression; however, patients treated with nicardipine experienced significantly less progression of minimal lesions, defined as stenoses of less than or equal to 20% severity. In the International Nifedipine Trial on Antiatherosclerotic Therapy (INTACT), nifedipine had no effect on overall progression and regression but, by one method of analysis, reduced the rate of appearance of new coronary lesions. In a preliminary report, diltiazem prevented the development of coronary atherosclerosis in heart transplant recipients. These studies indicate that calcium channel blockers retard the development of early atherosclerosis not only in animal models but also in human coronary arteries. Other studies recently completed or now under way will help to clarify the clinical role of calcium channel blockers in antiatherosclerotic therapy.
CT Check Tags: Animal; Human
Calcium Channel Blockers: PD, pharmacology
*Calcium Channel Blockers: TU, therapeutic use
Clinical Trials
***Coronary Arteriosclerosis: DT, drug therapy**
Disease Models, Animal
Drug Evaluation, Preclinical
Heart Transplantation
Rabbits

L29 ANSWER 6 OF 17 MEDLINE
AN 93217620 MEDLINE
DN 93217620 PubMed ID: 1297739
TI Atherosclerosis from a viewpoint of arterial wall cell function: relation to vitamin E.
AU Morisaki N; Yokote K; Saito Y
CS Second Department of Internal Medicine, School of Medicine, Chiba University, Japan.
SO JOURNAL OF NUTRITIONAL SCIENCE AND VITAMINOLOGY, (1992) Spec No 196-9.
Journal code: JFD; 0402640. ISSN: 0301-4800.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199305
ED Entered STN: 19930521

Last Updated on STN: 19930521
Entered Medline: 19930504

AB Vitamin E affects many key events in atheromatous lesions. Inhibition of EC injury and platelet aggregation was already reported.. Foam cell formation must be inhibited according to the data presented by us and other speakers. However, effects on cell proliferation of SMC are paradoxical. The in vivo effects will be dependent on the effective concentration of vitamin E in the loci.

CT Check Tags: Animal; Comparative Study; Male
Arteries
Arteriosclerosis: ME, metabolism
***Arteriosclerosis: PC, prevention & control**
Cell Adhesion: DE, drug effects
Cholesterol Esterase: DE, drug effects
*Endothelium, Vascular: DE, drug effects
Endothelium, Vascular: EN, enzymology
Endothelium, Vascular: ME, metabolism
Free Radical Scavengers
Monocytes: CY, cytology
Muscle, Smooth, Vascular: CY, cytology
Muscle, Smooth, Vascular: DE, drug effects
Rats
Rats, Wistar
*Vitamin E: PD, pharmacology
Vitamin E Deficiency: ME, metabolism

L29 ANSWER 7 OF 17 MEDLINE
AN 93047191 MEDLINE
DN 93047191 PubMed ID: 1424044
TI Interventions that beneficially influence the evolution of coronary atherosclerosis. The case for calcium channel blockers.
AU Waters D; Lesperance J
CS Department of Medicine, Montreal Heart Institute, Quebec, Canada.
SO CIRCULATION, (1992 Dec) 86 (6 Suppl) III111-6. Ref: 55
Journal code: DAW; 0147763. ISSN: 0009-7322.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199212
ED Entered STN: 19930122
Last Updated on STN: 19930122
Entered Medline: 19921223

AB Calcium channel blockers have been shown to retard the development of atherosclerosis in rabbits fed cholesterol-rich diets. The mechanism accounting for this effect is controversial but may be by stimulation of **cholesteryl ester hydrolase** activity in smooth muscle cells, by amelioration of hypercholesterolemia-induced endothelial dysfunction, or by inhibition of smooth muscle cell proliferation and migration. The effect of calcium channel blockers on the evolution of coronary atherosclerosis in humans has been assessed in two clinical trials. In the Montreal Heart Institute trial, nicardipine did not influence the overall rate of progression and regression; however, nicardipine-treated patients experienced significantly less progression of minimal lesions, defined as stenoses of < or = 20% severity. In the International Nifedipine Trial on Antiatherosclerotic Therapy, nifedipine had no effect on overall progression and regression but reduced the rate of appearance of new coronary lesions. These studies constitute a potentially important new approach to the management of coronary atherosclerosis.

CT Check Tags: Animal; Human

*Calcium Channel Blockers: TU, therapeutic use
Coronary Arteriosclerosis: PC, prevention & control
Coronary Arteriosclerosis: SU, surgery
***Coronary Arteriosclerosis: TH, therapy**
Disease Models, Animal
Heart Transplantation
Nifedipine: TU, therapeutic use
Rabbits
Randomized Controlled Trials

L29 ANSWER 8 OF 17 MEDLINE
AN 91063673 MEDLINE
DN 91063673 PubMed ID: 2248458
TI Clinical and experimental approaches to the prevention of atherosclerosis by immunological regulations.
AU Kuzuya F; Kuzuya M; Yasue M; Naito M; Funaki C; Hayashi T; Asai K
CS Department of Geriatrics, Nagoya University School of Medicine, Japan.
SO ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, (1990) 598 458-63.
Journal code: 5NM; 7506858. ISSN: 0077-8923.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199101
ED Entered STN: 19910222
Last Updated on STN: 19910222
Entered Medline: 19910110
AB To evaluate the involvement of the complement system in atherogenesis, we investigated the effect of camostat mesilate (CM), C1r, and C1 **esterase** inhibitor on **cholesterol**-induced atherosclerosis in rabbits. We also examined the effect of sodium dextran sulfate (DS, molecular weight: 7000), which is reported to be effective in preventing arteriosclerotic diseases and in inhibiting cholesterol-induced atherosclerosis in experimental animals, on complement activation in vitro and in vivo. The administration of CM reduced the formation of atherosclerotic lesions in cholesterol-fed rabbits. DS inhibited complement pathway in vitro, and the administration of DS reduced the C3a level in subjects. These results suggest that complement activation may possibly be involved in the atherosclerotic process.
CT Check Tags: Animal; Female; Human; Male
Aged
Arteriosclerosis: ET, etiology
***Arteriosclerosis: PC, prevention & control**
*Complement: PH, physiology
Complement Activation: DE, drug effects
Dextran Sulfate: PD, pharmacology
Guanidines: PD, pharmacology
Middle Age
Rabbits

L29 ANSWER 9 OF 17 MEDLINE
AN 89392166 MEDLINE
DN 89392166 PubMed ID: 2783199
TI Protective effect of BN 52021, a specific antagonist of platelet-activating factor (PAF-acether) against diet-induced cholesteryl ester deposition in rabbit aorta.
AU Feliste R; Perret B; Braquet P; Chap H
CS INSERM Unite 101, Hopital Purpan, Toulouse, France.
SO ATHEROSCLEROSIS, (1989 Aug) 78 (2-3) 151-8.
Journal code: 95X; 0242543. ISSN: 0021-9150.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English

FS Priority Journals
EM 198910
ED Entered STN: 19900309
Last Updated on STN: 19980206
Entered Medline: 19891026
AB Platelet-activating factor (PAF-acether), a phospholipid mediator involved in inflammatory reactions, has been reported to induce endovascular surface lesions. We investigated the possible involvement of PAF-acether in the mechanism of arterial cholesterol deposition. Rabbits fed a normal or hypercholesterolic diet were treated orally for 1 month with BN 52021 (20 mg/kg per day), a specific PAF-acether antagonist, and killed at the end of treatment. Cholesterol feeding resulted in a marked (50-fold) increase in plasma cholesterol. However, the drug had no significant effect on the diet-induced hypercholesterolemia. Free and esterified cholesterol were markedly increased (635%) in the aorta of animals receiving the atherogenic diet. This accumulation was reduced by 36% upon simultaneous administration of BN 52021 (P less than 0.02, n = 15). This decrease essentially affected the esterified cholesterol content. Conversely, BN 52021 showed no effect on the cellular cholesterol esterification, since liver acyl-CoA: cholesterol acyltransferase activity remained unchanged. This study indicates that BN 52021 is effective in reducing cholesterol accumulation in rabbit atherosclerotic aorta, without changing the plasma cholesterol levels.
CT Check Tags: Animal
*Aorta: ME, metabolism
Aorta: PA, pathology
***Arteriosclerosis: PC, prevention & control**
Cholesterol: BL, blood
Cholesterol Esterase: ME, metabolism
*Cholesterol Esters: ME, metabolism
Diet, Atherogenic
*Lactones: PD, pharmacology
*Platelet Activating Factor: AI, antagonists & inhibitors
Platelet Aggregation: DE, drug effects
Rabbits
Sterol O-Acyltransferase: ME, metabolism

L29 ANSWER 10 OF 17 MEDLINE
AN 88049134 MEDLINE
DN 88049134 PubMed ID: 3675303
TI Fish oil inhibits development of atherosclerosis in rhesus monkeys.
AU Davis H R; Bridenstine R T; Vesselinovitch D; Wissler R W
CS Department of Pathology, University of Chicago, Illinois.
NC HL 36104 (NHLBI)
HL-15062 (NHLBI)
SO ARTERIOSCLEROSIS, (1987 Sep-Oct) 7 (5) 441-9.
Journal code: 89S; 8401388. ISSN: 0276-5047.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198711
ED Entered STN: 19900305
Last Updated on STN: 19980206
Entered Medline: 19871127
AB The effect of feeding fish oil (Menhaden) on the progression of rhesus monkey atherosclerosis was determined by feeding diets containing 2% cholesterol and either 25% coconut oil (Group I), 25% fish oil/coconut oil (1:1) (Group II), or 25% fish oil/coconut oil (3:1) (Group III) for 12 months (n = 8/group). The average serum cholesterol levels were 875 mg/dl for Group I, 463 mg/dl for Group II, and 405 mg/dl for Group III. HDL cholesterol levels were 49 mg/dl for Group I, 29 mg/dl for Group II, and 20 mg/dl for Group III. An average of 79% of the aortic intima was

involved with atherosclerosis in Group I, 48% in Group II, and 36% in Group III. The aortas of both fish-oil groups (II or III) contained significantly less cholesterol (total, free, and esterified), as well as less acid lipase, **cholesteryl esterase**, and ACAT activities when compared to the coconut-oil group (I) (p less than 0.05). Microscopically, the aortic and carotid artery lesions were smaller in cross-sectional area and in thickness, and contained less macrophages in the fish-oil groups (II and III) when compared to the coconut-oil group (I) (p less than 0.05). This protective effect was not consistently enhanced by increasing the proportion of fish oil to 3:1 (Group III) over 1:1 (Group II). The results indicate that fish oil-containing diets reduce serum cholesterol levels and inhibit atherosclerosis even in the face of lowered HDL cholesterol levels when compared to a pure coconut oil/cholesterol diet in rhesus monkeys. Therefore, fish-oil diets exert effective protective control of progression of atherosclerosis during severe atherogenic stimuli.

CT Check Tags: Animal; Comparative Study; Male; Support, U.S. Gov't, P.H.S.
Aorta: PA, pathology
Arteriosclerosis: PA, pathology
***Arteriosclerosis: PC, prevention & control**
Carotid Arteries: PA, pathology
Cholesterol, Dietary: AD, administration & dosage
Diet, Atherogenic
Dietary Fats: AD, administration & dosage
*Fish Oils: AD, administration & dosage
Lipoproteins, HDL Cholesterol: BL, blood
Macaca mulatta
Sterol O-Acyltransferase: ME, metabolism
Time Factors

L29 ANSWER 11 OF 17 MEDLINE
AN 85208364 MEDLINE
DN 85208364 PubMed ID: 3923040
TI Nifedipine increases cholesteryl ester hydrolytic activity in lipid-laden rabbit arterial smooth muscle cells. A possible mechanism for its antiatherogenic effect.
AU Etingin O R; Hajjar D P
NC 5-TH (NHLBI)
HL-074423 (NHLBI)
HL-07423 (NHLBI)
HL-18828
SO JOURNAL OF CLINICAL INVESTIGATION, (1985 May) 75 (5) 1554-8.
Journal code: HS7; 7802877. ISSN: 0021-9738.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 198507
ED Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19850703
AB Calcium and cholesterol (CHOL) accumulation are characteristic features of human atherosclerotic plaques. Calcium channel blockers have been shown to increase calcium levels in myocardial cells and suppress free and esterified CHOL deposition in arteries of CHOL-fed animals. To test the hypothesis that Nifedipine alters CHOL metabolism, thereby decreasing free and esterified CHOL accumulation in smooth muscle cells (SMC), we cultured arterial SMC from rabbits fed a normal or egg-supplemented diet for 6 mo. Cultured cells were treated with 0.1 mg/liter Nifedipine every 3 d during a 1-wk experiment. Although Nifedipine significantly increased lysosomal and cytoplasmic cholesteryl ester (CE) hydrolase activity in normal SMC via increased levels of intracellular cyclic AMP, no change in total CHOL content was observed after 1 wk of Nifedipine treatment. Contrary to these

observations, lipid-laden SMC demonstrated a significant 50% loss in CHOL and CE after treatment with Nifedipine, due in part to the observed increase in CE hydrolytic activities. These data support our hypothesis that Nifedipine decreases CHOL and CE accumulation in arterial SMC by increasing arterial CE hydrolysis.

CT Check Tags: Animal; Female; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

***Arteriosclerosis: DT, drug therapy**
Cattle
Cells, Cultured
*Cholesterol: ME, metabolism
Cholesterol Esterase: ME, metabolism
*Cholesterol Esters: ME, metabolism
Cholesterol, Dietary: AD, administration & dosage
Lysosomes: EN, enzymology
Muscle, Smooth, Vascular: CY, cytology
*Muscle, Smooth, Vascular: ME, metabolism
*Nifedipine: PD, pharmacology
Rabbits
beta-Galactosidase: ME, metabolism

L29 ANSWER 12 OF 17 MEDLINE
AN 85148553 MEDLINE
DN 85148553 PubMed ID: 6680996
TI Effect of clinofibrate on lipid metabolism of aorta in atherosclerotic rats.
AU Shirai K; Ishikawa Y; Nishide T; Sasaki N; Murano S; Matsuoka N; Saito Y; Yoshida S
SO ARTERY, (1983) 12 (3) 145-55.
Journal code: 8NN; 7508494. ISSN: 0098-6127.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198504
ED Entered STN: 19900320
Last Updated on STN: 19900320
Entered Medline: 19850410
AB Atherosclerotic lesions formed in the aorta of rats given diet containing propylthiouracil (PTU), vitamin D2 and high cholesterol diet (atherogenic) for 8 weeks. The effect of clinofibrate, which lowers the plasma lipid level, on lipid metabolism in the arterial wall of the atherosclerotic rats was studied. Clinofibrate significantly decreased the high plasma cholesterol level of atherosclerotic rats, which was 823 +/- 256 (mean +/- SD) mg/dl, or about ten times that of control rats (85 +/- 11 mg/dl). On treatment with clinofibrate, the cholesterol level was reduced most in the very low density lipoprotein (VLDL) fraction (d less than 1.006). Heparin-releasable lipoprotein lipase activity in epididymal adipose tissue, lipoprotein lipase activity in post heparin plasma, and VLDL-triolein hydrolizing activity in adipose tissue stromal vessels were higher in clinofibrate-treated rats than in atherosclerotic rats. Of the enzymes in the arterial wall concerned with cholesterol ester metabolism, acid **cholesterol esterase** activity was decreased in atherosclerotic rats, and clinofibrate treatment increased this activity. The ratio of acyl-CoA cholesterol acyltransferase activity (ACAT) to neutral **cholesterol esterase** activity was higher in atherosclerotic rats than in control rats and was lower in clinofibrate-treated rats than in atherosclerotic rats. From these results, it is concluded that clinofibrate modifies enzyme activities in such a way as to cause a reduction of cholesterol accumulation in the arterial wall and lowers the plasma VLDL and LDL cholesterol levels.

CT Check Tags: Animal; Comparative Study; Male

Antilipemic Agents: PD, pharmacology

*Aorta: DE, drug effects
Aorta: ME, metabolism
***Arteriosclerosis: DT, drug therapy**
Arteriosclerosis: ME, metabolism
Cholesterol Esters: ME, metabolism
*Glycolates: PD, pharmacology
*Lipids: ME, metabolism
Lipoprotein Lipase: ME, metabolism
*Phenoxyacetates: PD, pharmacology
Rats
Rats, Inbred Strains

L29 ANSWER 13 OF 17 MEDLINE
AN 84272959 MEDLINE
DN 84272959 PubMed ID: 6463093
TI Influence of hypocholesterolemic drugs on aortic **cholesterol esterase** in rabbits.
AU Kritchevsky D; Singer D; Klurfeld D M
NC HL-00734 (NHLBI)
HL-03299 (NHLBI)
HL-23625 (NHLBI)
SO PHARMACOLOGICAL RESEARCH COMMUNICATIONS, (1984 Jun) 16 (6) 525-31.
Journal code: P3W; 0236354. ISSN: 0031-6989.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198408
ED Entered STN: 19900320
Last Updated on STN: 19970203
Entered Medline: 19840824
AB We have studied the influence of three hypocholesterolemic drugs (Fenofibrate, Pirinixil and Probucol) on aortic **cholesterol esterase** (E.C.3.1.1.13) activity in cholesterol-fed rabbits. After three weeks, cholesterol-fed controls exhibited a 28% increase in cholesteryl ester synthetase activity (S) and a 13% decrease in **cholesteryl ester hydrolase** activity (H) giving a 47% increase in S/H ratio. None of the drugs influenced cholesterol-induced synthetase activity, but fenofibrate treatment increased hydrolase activity resulting in a fall in the S/H ratio to the level observed in rabbits fed corn oil but no cholesterol. The other two hypocholesterolemic agents did not affect the aortic S/H ratio.
CT Check Tags: Animal; Male; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
***Anticholesteremic Agents: PD, pharmacology**
*Aorta: EN, enzymology
Arteriosclerosis: ET, etiology
Arteriosclerosis: PC, prevention & control
*Carboxylic Ester Hydrolases: ME, metabolism
Cholesterol: BL, blood
***Cholesterol Esterase: ME, metabolism**
Cholesterol, Dietary: AD, administration & dosage
Diet, Atherogenic
Probucol: PD, pharmacology
Procetofen: PD, pharmacology
Pyrimidines: PD, pharmacology
Rabbits

L29 ANSWER 14 OF 17 MEDLINE
AN 84038061 MEDLINE
DN 84038061 PubMed ID: 6632936
TI Lipids and cholesterol esterifying enzyme changes by Anna Pavala Sindhooram therapy in experimental rat hyperlipaemia.

AU Shanmugasundaram K R; Parthasarathy R
SO JOURNAL OF ETHNOPHARMACOLOGY, (1983 Jul) 8 (1) 35-52.
Journal code: K8T; 7903310. ISSN: 0378-8741.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198312
ED Entered STN: 19900319
Last Updated on STN: 19900319
Entered Medline: 19831220
AB The effect of Anna Pavala Sindhooram (APS), an indigenous drug showing lipid lowering action was tested in experimental rat atherosclerosis induced by feeding an atherogenic diet. APS was found to decrease the levels of serum cholesterol and phospholipids while triglycerides remained unaffected in atherogenic diet fed rats. Lipid levels in the aorta, liver and intestine were also increased by atherogenic diet feeding, and APS administration with diet restriction reversed this trend. Cholesterol ester was lowered. Both **cholesteryl ester hydrolase** (CEH) and synthetase (CES) activities in the tissues were elevated while the CEH/CES ratio was lowered in atherosclerosis. APS administration led to a decrease in enzyme activities and an increase in the CEH/CES ratio. APS in vitro inhibited both enzyme activities. NMR spectroscopic studies showed that the soluble components of APS bind or modify cholesterol. Iron, copper, magnesium and calcium present in APS may play a role in the removal of cholesterol ester from the aorta and its disposal.
CT Check Tags: Animal; Male; Support, Non-U.S. Gov't
***Antilipemic Agents: PD, pharmacology**
Arteriosclerosis: DT, drug therapy
***Arteriosclerosis: ME, metabolism**
Arteriosclerosis: PA, pathology
*Carboxylic Ester Hydrolases: ME, metabolism
***Cholesterol Esterase: ME, metabolism**
Hyperlipidemia: DT, drug therapy
Hyperlipidemia: ME, metabolism
*Lipids: ME, metabolism
*Medicine, Ayurvedic
Minerals: PD, pharmacology
Rats
Rats, Inbred Strains

L29 ANSWER 15 OF 17 MEDLINE
AN 81123984 MEDLINE
DN 81123984 PubMed ID: 233431
TI Effects of phthalazinol (EG 626) on arterial lipolytic enzyme activities in the rat.
AU Tomita T; Yonekura I; Shirasaki Y; Hayashi E; Numano F
SO PAROI ARTERIELLE, (1979 Dec) 5 (4) 181-4.
Journal code: ORO; 7606268. ISSN: 0398-7655.
CY France
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198104
ED Entered STN: 19900316
Last Updated on STN: 19900316
Entered Medline: 19810413
AB Phthalazinol (EG 626), a thromboxane A2 antagonist and cyclic AMP phosphodiesterase inhibitor, has been shown to prevent the atherosclerosis induced in cholesterol fed rabbits. In an attempt to clarify the antiatherosclerotic mechanism, the effects of this compound on the lipolytic enzyme activities (**cholesterol esterase** and

lipoprotein lipase) of rat aorta were examined in vivo. Administration of EG 626 (100-200 mg/kg, per os, daily, 1-2 weeks) affected neither the aortic lysosomal **cholesterol esterase** nor the acid phosphatase activity, whereas the lipoprotein lipase activity was signficantly decreased by the treatment. These results suggest that with an elevation in HDL-cholesterol, a decrease in lipoprotein lipase activity after ingestion of EG 626 might contribute, at least to some extent, to the prevention of arterial lipid accumulation.

CT Check Tags: Animal; Comparative Study; Male
3',5'-Cyclic-Nucleotide Phosphodiesterase: AI, antagonists & inhibitors
Acid Phosphatase: ME, metabolism
Aorta
*Arteries: DE, drug effects
Arteries: ME, metabolism
Arteriosclerosis: PC, prevention & control
Cholesterol: BL, blood
Cholesterol Esterase: ME, metabolism
*Lipolysis: DE, drug effects
Lipoprotein Lipase: AI, antagonists & inhibitors
Lipoproteins, HDL: BL, blood
*Phthalazines: PD, pharmacology
*Pyridazines: PD, pharmacology
Rats

L29 ANSWER 16 OF 17 MEDLINE
AN 79082488 MEDLINE
DN 79082488 PubMed ID: 728232
TI Regression of naturally occurring atherosclerotic lesions in pigeon aorta by intestinal bypass surgery. Early changes in arterial cholesteryl ester metabolism.
AU Ravi Subbiah M T; Dicke B A; Kottke B A; Carlo I A; Dinh D M
SO ATHEROSCLEROSIS, (1978 Oct) 31 (2) 117-24.
Journal code: 95X; 0242543. ISSN: 0021-9150.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197902
ED Entered STN: 19900314
Last Updated on STN: 19900314
Entered Medline: 19790226
AB Early changes in cholesteryl ester metabolism of the aorta during the regression of naturally occurring atherosclerotic lesions in pigeon aorta by ileal bypass surgery were examined. Three months after surgery, there was a decrease (50%) in the content of cholesteryl esters in the aorta. Increases in the activity of cholesteryl ester hypdrolase in the lysosomal (P less than 0.05) and the supernatant (P less than 0.01) fractions of the aorta also occurred at this time. There were no differences in the activity of cholesteryl ester synthetase and in the plasma levels of cholesterol and triglycerides between the ileal bypass group and the controls. These results suggest that ileal bypass surgery decreases the level of cholesteryl esters in the aorta, probably because of enhanced cholesteryl ester hydrolysis.
CT Check Tags: Animal; Support, U.S. Gov't, P.H.S.
*Aorta: AN, analysis
Arteriosclerosis: EN, enzymology
***Arteriosclerosis: SU, surgery**
Cholesterol Esterase: ME, metabolism
*Cholesterol Esters: AN, analysis
*Intestine, Small: SU, surgery
Pigeons

L29 ANSWER 17 OF 17 MEDLINE

AN 78037400 MEDLINE
DN 78037400 PubMed ID: 920445
TI Arterial **cholesterol esterase.**
AU Kritchevsky D
SO ADVANCES IN EXPERIMENTAL MEDICINE AND BIOLOGY, (1977) 82 878-81.
Journal code: 2LU; 0121103. ISSN: 0065-2598.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197712
ED Entered STN: 19900314
Last Updated on STN: 19900314
Entered Medline: 19771229
CT Check Tags: Animal; Support, U.S. Gov't, P.H.S.
***Antilipemic Agents: PD, pharmacology**
Aorta: EN, enzymology
*Aorta: ME, metabolism
***Arteriosclerosis: ME, metabolism**
*Carboxylic Ester Hydrolases: ME, metabolism
***Cholesterol Esterase: ME, metabolism**
*Cholesterol Esters: BI, biosynthesis
Clofibrate: PD, pharmacology
Dextrothyroxine: PD, pharmacology
Dietary Fats
Nicotinic Acids: PD, pharmacology
Oils
Sitosterols: PD, pharmacology